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THE AMERICAN FARMER,

CONTAINING

ORIGINAL ESSAYS AND SELECTIONS

ON

Rural Economy AND INTERNAL IMPROVEMENTS,

WITH

Illustrative Engravings

AND THE

PRICES CURRENT OF COUNTRY PRODUCE.

JOHN S. SKINNER, Editor.

"O fortunate nimium sua si bona norint,
"Agricolas."............VIRG.

VOL. IV.

Baltimore:
PRINTED BY J. ROBINSON, CIRCULATING LIBRARY, CORNER OF MARKET AND BELVIDERE-STREETS,
OPPOSITE THE FRANKLIN BANK.
1823.

Per.
328
v. 1

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AMERICAN FARMER.

RURAL ECONOMY, INTERNAL IMPROVEMENTS, PRICE CURRENT.

> " *O fortunatos nimium sua si bona norint*
> " *Agricolas.*" . . . . . VIRG.

Vol. IV. BALTIMORE, FRIDAY, MARCH 29, 1822. No. 1.

AGRICULTURE.

REMARKS

On the preparation of Mortar, by D. Olmsted, Professor of Chemistry and Mineralogy in the University of N. Carolina; addressed to the Agricultural Society of North-Carolina.—Read in the Society, and ordered to be printed, Dec. 4, 1821.

Presuming that the objects of this Society are sufficiently comprehensive to embrace all subjects appertaining to Rural Economy, I take the liberty to offer a few remarks on the preparation of Lime-Mortar, for building. I have been led to make choice of this subject, from the belief, that the defective and perishable modes of building, common in many parts of our country, are owing, in no small degree, to the imperfections of the mortar employed. The correctness of most of the remarks that will be offered on the composition of mortar, I have had opportunity to verify by actual experiment. To some members of the Society, particularly those who have been much conversant with building, I must apologize for reciting facts, and giving reasons, already familiar to them. The explanations are made as plain as possible, for the sake of those who have not had opportunity to acquire the same information. If any improvements can be suggested in the ordinary modes of making mortar, it is doubtless important that they should be *generally known*; for it is only in the most expensive undertakings, and consequently in such as are of rare occurrence, that we can avail ourselves of the skill and experience of the professed architect.

The ancient Romans, who displayed their political wisdom in so many ways, regarded the preparation of mortar of such vast importance to the strength of their architectural works, and the durability of those structures which they designed for conveying to distant posterity an impression of their opulence and power, that they enacted laws to prohibit the use of bad, and to enforce the use of good mortar. Nor, as we shall see by and by, were their artisans less attentive to the subject than their legislators. And what has been the consequence? Such parts of their buildings, and other public works, as the despoiling hand of barbarians has spared, have only grown firmer and more imperishable by the lapse of two thousand years. The mortar with which their structures of stone or marble were cemented, has acquired a hardness which, in many cases, surpasses that of the materials themselves, so that the whole fabric has gained the firmness of a solid rock. Happily, Roman Authors have given us the exact details of the process by which this cement was prepared; but neither their statement, nor the examination of the article as it is found in the remnants of their works, indicates that any thing was used in its composition but lime and sand: its excellence must, therefore, have arisen from the quality of these materials, and the perfect manner in which they were united.

I propose to speak of the chemical principles involved in the manufacture of quicklime, and the hardening of mortar; of the qualities of good mortar; of its composition or formation; and, finally, of the preparation of hydraulic mortar, or water cement.

I. For the sake of some who may not have had opportunity to understand the nature of the changes that occur in the manufacture of quicklime, and the hardening of mortar, I may be permitted to explain the PRINCIPLES on which these changes are produced.

Limestone, before it is burnt, is a compound of quicklime and fixed air, or what is called by chemists *carbonic acid*. Some, who have never turned their attention to subjects of this kind, may find it difficult to conceive, how a species of air can make a constituent part of a body so solid as limestone. This difficulty will vanish, when they reflect, that air consists of solid particles in a very minute state of division; that when it goes into union with a solid substance, as quicklime, those particles that were before separated in the form of air, are brought, by the force of attraction, so near to each other, as to be reduced into a comparatively small space. On the application of heat, these particles are expanded again to their former dimensions, and fly off from the solid in the state of air. These principles enable us to explain what takes place in the conversion of limestone into quicklime. By calcination, the fixed air, which made up forty parts in a hundred of the whole mass, is expelled. The imperfections of lime not sufficiently burnt, arise from its still retaining a portion of fixed air, the substance being partly in the state of limestone, and partly in the state of quicklime. On the other hand, when the heat is carried too high, the lime becomes partially vitrified, by which means its qualities are very much impaired. Pure limestones are not so much inclined to vitrify as those which contain foreign ingredients, such as sand, clay or iron. Limestone, containing either of these substances, requires to be burnt with a lower heat, and continued longer than usual. When properly burnt, they often constitute some of the best kinds of lime, especially for water cement.

I may be pardoned for digressing here a little from the main subject, to give some rules which will enable any one to decide, whether a given mineral is limestone or not. The different kinds are exceedingly various in appearance, but may all be known by one or more simple trials. Limestone is generally of such a degree of hardness as to be readily scratched with a knife; but it is too hard to be cut like soapstone and gypsum. If a drop of any strong acid fall on limestone, it will boil or effervesce. This is the most convenient test, and is not apt to lead into error. For the acid, oil of vitriol, or aqua fortis, or muriatic acid, may be employed, one or all of which may generally be obtained of apothecaries or physicians. It may be diluted with an equal bulk of water, and kept in a small phial with a stopper of glass or beeswax. When used, the stopper may be wet by turning down the acid upon it, and then applied to the mineral. If this effervesces, we may conclude it to be limestone. A mass, say a quarter of a pound, may be put into a blacksmith's forge, and kept at a high heat for an hour. If this mass, when cold, slacks on the application of water, we may be sure that it is lime.

Every one knows that the properties of lime are greatly altered by calcination. The only point upon which it may be necessary to remark, is the strong attraction quicklime has for the fixed air that was separated from it by burning. If left entirely open to the atmosphere, it will speedily acquire nearly the whole of what it had lost, and become as unfit for mortar as powdered limestone would be; and its strength is weakened, and its properties are impaired, in proportion to the quantity of this principle absorbed. Hence, in keeping lime, and in the several operations attending the manufacture of mortar, we ought to use all possible means to prevent its combining with fixed air. Some of these means will be noticed as we proceed. In Great-Britain, it is deemed a point of so much importance to have the lime, when it is used, perfectly free from carbonic acid, or fixed air, that in the structure of the public works, at Woolwich, it is taken hot from the kiln, and used immediately afterwards. But after the mortar is made up, and applied to the purposes for which it was intended, then we no longer wish to prevent the lime from absorbing fixed air; for by this means, and by consolidating a portion of water, it returns from the state of quicklime to that of limestone, and resumes the hardness it originally possessed while in the state of massive rock. The hardening of mortar, therefore, depends chiefly on two properties—the power of absorbing fixed air from atmosphere, and of rendering solid a portion of water. *Slow drying* also contributes very much to its ultimate hardness, and time is necessary to enable it to acquire its greatest solidity. The unrivalled hardness of the Roman cement is owing, in part, no doubt, to the length of time that has been occupied in its consolidation.

II. THE QUALITIES OF GOOD MORTAR ARE, "to adhere readily to the substances to which it is applied; to cement them together; and to acquire by time a strong hardness." Consequently, mortar will not be good if it crack in drying, or if it be soft and brittle when dry. When a chimney, for instance, is laid with good cement, the detached parts, after some time, become united into one mass; so that the whole structure has the same firmness as it would have, were it composed of a single mass of brick or stone; and a wall plastered skilfully, will present a surface almost as firm and impenetrable as marble. On the contrary, it is obvious that a cement which does not bind the detached parts of a structure together, operates merely by filling up the crevices, while the fabric has little more stability, than what results from piling brick or stone one upon another. A wall likewise made of soft or rotten mortar, will be liable to cleave off on every agitation, or even by its own weight; or if it cracks, the aggregate strength of the wall will be feeble, compared with that which would result from the firm cohesion of all its parts. Let us enquire, then, by what means we may compose a cement, which shall possess all the good properties enumerated, without the bad.

III. What relates to the COMPOSITION OF MORTAR, comprehends, the selection of the materials—the proportions in which they are united—and the mode of incorporating them.

1. *Materials.* The essential ingredients of good mortar, it is well known, are lime and sand. But it is plain, that articles very diverse in kind and quality may be signified by these terms; and it may be useful to enquire what kind of lime, and what kind of sand, are to be selected. It is asserted by high authority, that the colored varieties of *lime*, the blue, for instance, compose a stronger cement than the white. The latter, indeed, consists more exclusively of lime, the former being mixed with more or less iron, sand, or clay. These foreign ingredients, however, improve the quality of the mortar; but since the white lime will take a larger

quantity of sand, it is generally preferred in our market An opinion may be formed of the comparative excellence of a given specimen of white lime, by observing the force with which it slacks. Dip a small mass into water, holding it with a pair of tongs, and after it has remained a short time, lay it upon a board. If it swells, cracks, and falls into powder, with great heat, we may pronounce it to be of good quality. If it does not slack readily, with the foregoing appearances, we may infer that it has much fixed air, which it has either absorbed since its calcination, or which was never entirely separated from it during that process. We may be sure the latter is the case, when hard lumps remain after slacking. This preliminary experiment is a useful one, to enable us to judge of the strength of our lime, and to regulate the proportion of sand accordingly. The best way, where it is practicable, is to use lime recently from the kiln, or to burn it over just before it is used. In the selection of the *sand*, there is room for much care and discrimination. In all cases it should be sharp and clean, perfectly free from clay or dirt. For brick work, coarse sand is preferable, because it makes the hardest cement; for plastering, finer sand is better, because it makes the compound more plastic. Such sand as is found on the banks of rivers, or in the street, or at the bottom of hills washed by rains, is the kind intended. Sea sand contains a mixture of certain salts, which prevent mortar that is made with it from hardening, and therefore, when used, ought to be repeatedly washed with fresh water. In places, also, where sand cannot be found free from clay or dirt, it may be separated from these ingredients by washing. An appropriate apparatus has been contrived for this purpose, and various expedients may be devised to suit different circumstances. In common operations, it will be sufficient to stir up the impure sand in a tub of water: the sand will first settle to the bottom, while the other ingredients remain suspended, and may be turned off along with the water. If this be turned into a separate vessel, the impurities will, in time, fall to the bottom, and the same water may be used repeatedly.

It is the practice of many of the masons in this country, to add a certain portion of clay to their mortar, or at least to select such sand as naturally contains it. This is done with a view to render the compound more plastic; or, in other words, to prevent its being *too short*. But any portion of clay does great injury to the cement, by imparting to it the following properties.

1. *Such mortar contracts in drying.* This is a distinguishing property of clay, as every one knows who has ever observed the fissures that appear on the surface of clay ground which has been wet and dried. When mortar of this discription is applied to brick work, a chimney for example, it shrinks as it dries, into a smaller compass, and consequently the chimney settles down, often so unequally as to distort it, to disjoin it from the house, or to produce rents in the body of it; or, when used in plastering, such mortar cracks and falls off from the laths.

2. A cement that contains much clay *will never acquire great hardness.* With this ingredient, it will, indeed, be more plastic, and easier to work, and will make a smoother wall than mere lime and sand; but for all the purposes of a wall, of which *strength* must be admitted to be most important, it will be far inferior to one composed of those ingredients simply. In addition to our own observations, we have the authority of *Smeaton*, the famous Engineer, who built the Edystone Light-house, for asserting, that "mortar of the best quality, when mixed with only a small portion of *unburnt* clay, never acquires that hardness and dryness which, without this addition, it would speedily have attained." Clay, however, that has been *baked*, becomes a useful constituent of mortar; and it might be well worth the attention of those who live where it is very difficult to procure good sand, to make trial of brick dust. Refuse bricks would be very suitable for this purpose; and probably methods may be devised of reducing them to powder, which would render the task neither arduous nor expensive.

Next to the *materials* for mortar, we were to consider,

2. *The proportion of the ingredients.* For brick work, the proportion generally recommended, is 1-5 lime, or 4 bushels of sand to 1 of lime. But in a country like this, in many parts of which lime is very dear, on account of the distance to which it is transported, the fact ought to be more generally known, that *a good mortar may be made with a much smaller proportion of lime.* With clean sharp sand, one-tenth of good stone lime will answer very well; and, indeed, with proper management, will compose a cement extremely hard. Masons complain, however, of its being *too short;* but this difficulty may be obviated, first, by dexterity in the use of the trowel, a dexterity which may be speedily acquired; secondly, by suffering the mortar to remain some time before it is used; and, thirdly, by incorporating the materials very thoroughly together, especially just before using. On this subject, I tried the following experiment. A cask of good stone lime, which slacked with great heat, and crumbled into a fine powder, without lumps or other impurities, was mixed, immediately after slacking, with coarse sand, that was sharp and clear, in the proportion of one to nine, the lime forming one-tenth of the whole. Small beds were made up at a time, in order that the ingredients might be more effectually incorporated. As little water as possible was added, but the mass was rendered plastic by continued working with a hoe. As fast as the beds were made up, they were successively thrown into a pit dug in the ground three feet deep, and sufficiently capacious to contain the whole. Finally, the mortar was covered over with boards, and suffered to remain for three months. At the end of this time it was taken up, worked over anew, and used for laying bricks. After an interval of 15 months since it was applied, I have an opportunity of comparing it with such as contained one-fifth and one-seventh lime, made up in the ordinary way, and used soon after; and I find it harder than either of those. I have detailed this experiment with some minuteness, hoping that it may be useful to those who are engaged in building, but live in a place where lime is dear, to know how small a proportion of it may be made to answer the purpose; and hence, that they may be induced to employ pure lime and sand, instead of clay or dirt. It is probable, indeed, that a cement might be made with these proportions, that would answer tolerably well for brick or stone work, without taking so much pains in the composition of it. But as it was my object to make the best cement possible with the least lime, it may not be amiss to review the several steps, in order to see how each part of the process conduced to my purpose.

1. The mortar was made up three months before it was wanted for use, for two reasons: one was, that the lime was on hand; if suffered to remain in the cask, its strength would be impaired by combining with more or less of fixed air. The other reason was, that the quality of mortar is essentially improved by keeping before it is applied. We are assured by one of the best authorities,[*] on this subject, that such mortar "not only sets sooner, but acquires a greater degree of hardness, and is less apt to crack;" and that the ancient Romans, whose mortar was so famous, "were prohibited by law, from using that, which was less than three years old.";

2. My object being, throughout, to prevent the absorption of fixed air, the reason for slacking small parcels at a time, and stowing away the mortar as fast as it could be made up, is sufficiently obvious.

3. That as little water as possible should be used, and that the mass should be rendered plastic by *working*, is strongly recommended by experienced masons. The Greeks, we are told, deemed this point so important, that in the structure of their large buildings, they separated a mass of mortar into small parcels, contained in separate basins, and kept ten men at each; and the precept of ancient masons to their laborers was, *that they should wet their mortar with the sweat of their brow.*[†] The Romans also are known to have beaten their mortar with heavy machinery. Perhaps the principal reason for using but little water, is the greater probability in this case of the compound being worked more effectually.

4. The mixture was kept in a pit under ground, partly, because this furnished a convenient receptacle for it, and partly, because, in this situation, it was screened from the action of the air, which would affect it very little, except on the upper surface.

The remarks that have been made, refer to mortar intended for brick or stone work; but whatever relates to the strength and durability of the composition, applies equally well to such as is intended for plastering walls. For the latter purpose, however, to render the mass sufficiently tenacious, a larger proportion of lime and finer sand, are requisite. I have found, that one-seventh of lime, with clean sand, would answer, if the want of tenacity was remedied, by adding a greater quantity than usual of hair well disseminated through the mass. In the case alluded to, the workman was of opinion that the mortar would be so *short* as not to cling to the laths; or, as he expressed it, so short that it would not *key*. But by a little dexterity in the management, he succeeded perfectly well, and was surprised to find the wall, on drying, so speedily acquire firmness and solidity, without a single crack. As so much hair would impair the beauty of the external coat, it is necessary in that case, to use more lime and finer sand. It is a great mistake, into which some persons I have met with, have fallen, to suppose that mortar of an inferior quality, will serve for the first coat. It is obvious to the least reflection, that the first coat, having not only its own weight to sustain, but that of the others also, requires to be the strongest of all. It may be illustrated by the fable of the boys who let themselves down, by each others' heels, from a bridge, in pursuit of the moon. The first, feeling his hold slacken, let go to spit in his hands, and they all tumbled into the water together.

The rules which have been given for the composition of mortar, are sanctioned by the testimony of the best architects and engineers; and I lay claim merely to the humble merit of having proved their efficacy by my own experience. But, however preferable it may be to build chimneys and form walls of good mortar, instead of bad, we know that hardly any new plan was ever proposed, but what met with more or less opposition. What then will probably be the objections urged against the mode here recommended? They may be the following.

1. *That it is too expensive.*—We will, for comparison, estimate the whole cost of a chimney at 75 dollars. Now, supposing the mortar to be made in the manner here recommended, one barrel of lime will be sufficient for a chimney. Let it cost five dollars—it rarely costs so much. Clay or dirt mortar would cost something; but we will grant, that our chimney costs five dollars more than the other.

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[*] *Aikin's Dict.* 1, 278.

[†] *Rees' Cyclop. Art. "Mortar."*

For 75 dollars then, we have a chimney which will not be liable to settle out of its place, which consists of one solid mass made firm by the cohesion of all its parts, and which will grow firmer by time; which is impenetrable to the action of the elements, and proof against the erosions of vermin; and which will be able to maintain its ground against the violence of winds and tempests. The other has a chimney for 70 dollars, which, as the mortar dries, will settle down continually, and so unequally perhaps as to separate from the house, or to crack in the main body, or to cause an opening in the hearth of the fire-place. Its aggregate strength is little greater than that of a similar pile of naked brick or stone; the elements easily prey upon it; and small animals that are apt to infest a house, knaw their way through its crevices. Thus the dangers of fire are multiplied; and a strong March wind or September gale, jostles the bricks out of their places, or tumbles the whole upon the ground.

2. *It will be difficult to make servants bestow so much labour on mortar in its preparation, as is recommended.* I only answer, that if we expect to make improvements in any of the arts, we must bring our labourers to our rules, and not accommodate our rules to their habits.

3. *Shall the man of reading, or the scholar, pretend to teach the art of making mortar to the experienced mason?* By no means: still the man of reading may avail himself of rules given by a mason far more accomplished in his business than the one he employs, whose superior achievements in the art, entitle him to special confidence. I have alluded to Mr. Smeaton, the celebrated engineer who built the Edystone Light House. He may furnish an example of one whose authority, in subjects of this kind, is to be regarded as particularly valuable, because he united the philosophy of the man of science with the practical skill and experience of the engineer. On the coast of England, not far from Plymouth, is a cluster of very dangerous rocks called the Edystone Rocks. For the safety of navigators, it was a great object with the British government to build a Light House on the spot; but the waves often dash over it so tremendously, that almost insuperable difficulties were to be encountered in the erection of the building; and should they succeed in finishing it, it was doubtful whether it would sustain the dreadful shocks to which the place is subject during a violent storm at sea. The attempt, however, was made, and a Light House completed in the year 1700. The architect was so sanguine in his opinion of its strength, that he declared his wish to be in it during the most violent storm that could blow. He had his wish, and perished in it during a storm that occurred in 1703. About the middle of the last century, Mr. Smeaton at the request of the government, undertook to rebuild it of stone. To secure all possible durability in his materials, he instituted various experiments on composition of mortar. I will only add, that the Light House built under his direction, has withstood, for more than half a century, the rudest shocks of that stormy coast. Now, rules which we derive from such authorities as this, are surely entitled to more confidence than those of an ordinary artisan who, however long his life may have been, has gained little experience, having never tried but one method, and that was taught him during his apprenticeship.

I had intended to include in this paper, particular directions for the preparation of *a cement that will harden under water*; but lest I may trespass on the patience of the Society, I will only add a few brief remarks.

If common mortar be employed for works exposed to the action of water, the water should not be admitted until it is as dry as possible. Where this condition cannot be maintained, a cement of common lime and sand, will soften and wash away under water.

A perfect water cement is made of lime united with a species of volcanic sand imported from Italy, called Puzzoland; but as this article is expensive, various substitutes have been proposed. The most common is that extensively employed by the Dutch in the construction of their dykes, called *trass* or *tarras.* It consists of a porous kind of basalt, which is prepared by merely grinding and sifting. The species of rock is the same with that which constitutes the basaltic wall of Rowan; and specimens have been sent to the University from that county, from Surrey, and several western counties, which is nearly or quite the same substance as the Dutch tarras. It is a liver-coloured, porous, dull, earthy substance, sometimes scattered over the ground in fragments, and sometimes accumulated in masses of rubbish, partially reduced to powder. A mineral nearly allied to this, and used for the same purpose, accompanies the great free-stone range, which I regard as a continuation of the Richmond coal formation, extending from the Roanoke to the Yadkin. I am not able at present to fix its precise limits; but it passes through the counties of Wake, Orange, Chatham, Moore, and Anson, In different parts of the formation there occurs a mineral, usually appearing in angular fragments, and frequently accumulated to such an extent as to constitute a considerable ridge. It is of a dark brown colour within, but incrusted on the outside with iron-rust. Hence it is commonly called *iron-stone* in this country, but in Scotland, *whin-stone*. If this stone be heated very hot, and in that situation thrown into cold water, it becomes easily reducible to powder, and answers every purpose of the Dutch tarras.

An excellent water cement may be formed by adding to the common materials a quantity of the metal called manganese. This article would be too expensive, unless we can find it within our own limits. I am happy to say that I have received a specimen of manganese from Surry, which is very suitable for this purpose, though I am not informed to what extent it is found. A species of lime that is *brown* when calcined, contains naturally a portion of manganese, which renders it particularly suitable for hydraulic mortar. Certain iron ores, commonly called *white iron* ores, also contain a portion of manganese; and, when pulverised and added to the common ingredients for mortar, compose a very good water cement. Even the black scales, which fall from the anvil, and which are easily pulverized and sifted, will form with lime an excellent variety of this mortar; and for limited operations may be the most convenient substance for that purpose.

Finally, a certain kind of impure limestone, containing a large portion of sand and clay, and a little iron, is so well adapted to this purpose as to have acquired the name of *hydraulic* lime. An extensive formation of it has lately been discovered in the State of New-York, where it is used on a large scale in the construction of the great canals of that State. From the diversified character of the limestone of Stokes county, I should not suppose it improbable that there might be found among them a kind which would serve for water cement. But should not this supposition prove true, the foregoing facts show, that we have several other materials which will answer the same purpose.

Not having time to point out the particular modes of preparing these several species of hydraulic mortar, I beg leave to refer the members of the Society to the large Encyclopædias, Davy's Elements of Agricultural Chemistry, Park's Chemical Catechism, Aiken's Dictionary of Chemistry and Mineralogy, or the American Journal of Science; in each, or all of which, particular directions may be found for its preparation.

The Cottager's Manual,

FOR THE MANAGEMENT OF BEES THROUGHOUT EVERY MONTH OF THE YEAR.

To the president, vice presidents, the treasurer, and members of the British Apiarian Society, who, by their laudable endeavors, have encouraged the culture of the Bee, amongst the cottagers, this manual is dedicated, with feelings of the most profound respect, by their secretary.

Before I enter upon the particulars of the practical management of Bees, it may be attended with great advantage to the cottager, to receive some instructions which ought to be minutely attended to in the purchase of hives; for one of the first things which it is necessary for a person to know, who is desirous of keeping Bees, is the difference between a good and a bad hive. There is no kind of stock in which a purchaser can be so easily deceived as in a hive of Bees, for few possess either the courage or the ability to examine it, and still fewer are aware of the particular excellencies which ought to distinguish a sound and healthy hive. It must therefore be taken into consideration, that the failure which often attends the keeping of Bees, arises more from a want of judgment in the purchase of the stock hives, than from any of those accidental causes to which that failure is in general attributed. If a farmer goes to market who is totally ignorant of the particular points which constitute the soundness of a horse, or the goodness of a cow, and he purchases either solely on his own judgment, and it afterwards turns out good for nothing—he has only his own want of judgment to blame, and must not throw the censure upon the animal. Human nature is prone to deception in all cases in which self-interest is concerned; and a person, having some stocks to sell, and who to some judgment unites a little cunning, will naturally attempt to recommend his worst and worn-out hives, and will use all his rustic eloquence to persuade the ignorant purchaser, that the goodness of a hive is alone to be determined by its weight. This indeed is in some instances true, but only where it concerns the swarms of the current year, for after that period, the weight is a false criterion; the worst hives generally weighing the most, and this is accounted for by the great quantity of bee bread which is found in old hives, and which being a very heavy substance is apt to mislead the unwary purchaser, who not being aware of the existence of such a substance in a hive, conceives that it is the extraordinary quantity of honey which causes the excessive weight.

When a person intends to purchase a hive, he should go in the middle of the day into the garden where it stands, and take particular notice of the manner in which the Bees of any individual hive work. As it is probable there may be other hives in the garden, the choice is easier to be determined by a comparison of one hive with another, in regard to the following particular points.

1—The number of Bees which are seen going in with the yellow balls, or pellets, attached to their legs.

2—The number of drones; the greater the number, the more prolific the hive.

3—The general bustle and activity which are observed about the hive, and whether the Bees leave the hive with velocity, taking wing immediately that they come out—or whether they saunter about and then re-enter the hive—the latter is a bad symptom.

4—The eagerness with which they appear to repel the robbing Bees.

5—The number of Bees which stand at the entrance, fanning with their wings;—some Bee-masters call these Bees the musicians of the Queen's band, as they continually make a humming noise; others call them idle Bees, for the same reason as they call a cow idle, who is chewing the cud—both are fulfilling a positive law of nature—and the greater the number of Bees at the entrance, the greater the internal heat, which being occasioned by a crowded population, indicates at once the goodness of the hive.

These may be called the exterior signs of a good hive, as far as relates to the bees themselves; now in regard to the hive itself, some people are very careless and indifferent as to the quality of the hive into which they put their swarms; some will put them into hives, the bands of which are all rotten and decayed, and which are consequently the receptacle of those very insects and vermin which are so prejudicial to Bees; others will take no care as to the dryness of the hive, which is an essential point to be attended to, for if the hive be damp, the noxious influence is communicated to the combs, and they become soon spoiled. A swarm ought always to be put into a new hive, well seasoned, and lightly made; were this advice always attended to, we should not witness so many disastrous failures which annually occur in the management of Bees. Never select a stock the hive of which appears to be rotten—if a swarm of the current year has been put into it, the hive will soon destroy the Bees—and if the Bees in it are as old as the hive itself, it is not worth the trouble of removing, much less of paying for it. In an old hive, the chances are a hundred to one against you, but that it has been the breeding place of the moths, the eggs of which afterwards hatching by the heat of the hive, produce the caterpillars which in a week will destroy a whole hive.

Having now mentioned the exterior qualities of a good hive, I will proceed to the interior, and here the greatest difficulty presents itself to the young practitioner. Most people entertain a most ungrounded fear of Bees, and deem it almost madness to turn up a hive to inspect it. Now, I wish particularly to expel this idea from the minds of those who have a wish to keep Bees, but who are restrained by that very fear. The Bee is a bold and passionate insect, but it is at the same time a great coward, and like human cowards will bluster a great deal, but run away at a shew of determined courage. The means of quelling the anger of Bees and reducing them to complete submission, so that you can handle them like a number of beans, are so simple, that no one should entertain any fear of doing whatever he pleases with his Bees: a little tobacco smoke, or indeed the smoke from almost any substance will quell the courage of a whole hive.

Some people always select the evening for their operations on their hives, but it is the most unseasonable time they could select, for the Bees are then all of them in the hive, and their anger is much more easily roused in the evening than in the middle of the day. In the evening the Bees get upon your clothes, and crawl about until they find some vulnerable part to sting you,* but in the day-time, the majority of the hive are in the fields, and are too intent upon their labors to take much notice of your operations.

Having fixed upon the hive which you intend to purchase, loosen it gently from the board on which it stands, for should it not have been plastered down, the Bees will have fastened it themselves. Be careful not to jerk it, for this motion will be apt to rouse the Bees, and may perhaps break some of the combs. The hive being loosened, turn it gently up; the Bees will make a slight buz, and should they shew any disposition to fly or to sting, smoke them with some tobacco smoke from the fumigating bellows, or common tobacco pipe.—Proceed then to inspect the interior, which must present the following appearances.

1—The hive must be crowded with Bees.

2—The combs must be of a yellow hue, which declares it to be a new hive. Should the combs be very black, reject the hive altogether, for it is infallibly an old one.

3—The side combs must be completely filled with honey, which can easily be ascertained by observing all the cells sealed up, whereas the cells in the middle combs will be empty.

4—If a number of Queen-cells are perceived, which will be seen attached to the sides of the combs, like small inverted acorn cups, only more closed at the top—reject the hive, for it is a sure indication of an old hive.

5—If a very strong odour issues from the hive†,—reject it.—This is, however, a difficult criterion to establish, as it cannot be supposed that an unexperienced person can immediately distinguish the different odours which proceed from a hive.

6—If any liquid spots of a dark colour appear upon the board of the hive, it would not be prudent to purchase it, for it is certain that the Bees are afflicted with the dysentery.

7—If you perceive on the stool a great number of small yellow particles of wax, it is a positive proof that the hive is infected with moths—it would be throwing money away to purchase such a hive; and if amongst those particles some small grubs are perceptible, with a reddish head, you may condemn the hive as good for nothing, for it will not last two months longer.

8—If you perceive the wings of the Bees to be ragged or torn at the ends, it is a positive sign of an old hive.

Having thus examined the hive, outside and inside, and determined on the purchase of it, the next step to be taken is its removal. For this purpose, the evening must be selected, and when it is perceived that the Bees are all come home, stop up the entrance with some clay, or any other substance at hand; this, however, is under the supposition that you can take the board also on which the hive stands, but should it be placed with others upon a bench, which is a most injudicious plan, a board must then be laid upon the ground, exactly in the front of the hive, and the hive must then be gently lifted upon it; but here a difficulty will occur, which shews the inconvenience of placing several hives on the same bench. As soon as the hive is taken off, a great number of Bees will be found on the board, which must not be sacrificed, the hive must therefore be held level with the board, and the Bees must be swept into it with a goose's wing or a small branch of a tree; the hive must then be placed upon the board, and the entrance stopped up, and every crevice through which a Bee can escape.* The hive can then be removed by tying an old sheet or table cloth round it, and carried by the hand or on the head. If you have purchased two or three hives, they may be removed on a hand barrow, or carried like two milking pails. Having arrived at the place of their destination, let them settle for about half an hour, taking the clay from the entrance, that the Bees may not be suffocated; then deposit the hive on the pedestal, letting it front the south east, and on the following day plaster it round the bottom. The stock may then be considered to be fairly established, when it becomes the duty of the proprietor to attend to the following instructions.

(To be continued.)

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* During my residence in Scotland I had, one evening, a convincing proof of the truth of this remark, in the person of an honest brawny Scot, who generally assisted me in my Apiarian experiments, and who was always habited in the "garb of old Gaul." Matters went on very smoothly with us for some time, until about twenty or thirty Bees had found their way up the legs of the unsuspecting Scot, and getting beneath his kilt, began the operation of stinging, without distinction of place or circumstances. It was a most ludicrous scene,—no Grimaldi ever performed such surprising antics. It was the Highland fling with all its graceful attitudes, accompanied every moment with the ejaculation "D——n the beasties—there be anither." The poor man was however so stung, that he was confined to his bed for a week.

† This particular odour is well known to professed apiarians, but it is difficult to describe it; it is neither the smell of honey nor of wax, and proceeds either from the putrid excrements of the Bees, occasioned by the dysentery—from the corrupted brood—or from an unusual quant ty of Bee-bread, which is always found in old hives.—I am inclined to attribute it to the first cause.

* The necessity of minutely attending to this advice will be apparent from the following circumstance. I once purchased a hive of an indigent woman, who was obliged to leave her cottage, and I procured a man to remove it for me, who carried it upon his head. I thought we had stopped up every hole through which a Bee could escape, but it being a very old hive, I soon found I was mistaken, for we had not proceeded far, before two Bees made an attack upon the man's ear, who, not much relishing his new acquaintance, threw down the hive without any further ceremony—the combs were broken—the Bees were drowned in the honey, and I ultimately lost my hive.

British Farmer's Distress.

The general distress that has prevailed since the peace, among the farmers of England, does not appear to decline. A very voluminous body of evidence on the subject, has been taken before a committee of the house of commons, and since published in a folio volume, and many pamphlets and essays has been written also on it. The following is from Bell's Weekly Messenger, of Sept. 17, 1821.

AGRICULTURAL EVIDENCE.

There are two or three points connected with the evidence on the Agricultural Report, upon which we deem it of some utility to make a few observations, inasmuch as our own personal experience has manifested to us, that very incorrect and confused notions still exist upon these subjects. One of these is the certainty of the alleged depreciation of money, and its causes;—the second is the absurd allegation, that land will not pay for its tillage, even exclusive of any rent;—the third is the mischiefs to the cause of the farmers, in the exaggerated statements submitted to the committee of the charges and expenditure of farmers in the ordinary course;—and the fourth and last, the confirmation of our often repeated assertion, that the true remedy is in the reduction of rents in the first instance, and tithes, rates and taxation in the next. We promise, that with a natural leaning towards the farmers, from the memory of our early life, we consider ourselves in treating the question as a kind of abitrator between the manufacturing and landed interest; and we come to the question with so many more advantages than any of our cotemporary papers, inasmuch as, in the two periods of our early and later life, we have necessarily become acquainted with the circumstances of both conditions. Add to this, that we have not a sixpence of peculiar interest in the question either way, except as our individual interest is involved in that of the country in general.

As regards the first of these points, the difficulty with plain understandings is this, that in 1793, in 1800, and 1814, and in 1821, a one pound note or a five pound note was always exchangeable for the same value of silver, namely, for twenty or an hundred shillings; and as their current value was thus always the same, how they demand, can you assert their depreciation? In the first place, this allegation is not true in the degree in which it is taken; for such notes were never so changeable, except where, from favor, or some external profit, people were obliged so to change them. One or two or three notes might have been so exchanged; but what money broker would have changed forty, fifty, or an hundred, at their par in bullion? The fact, therefore, is not so. But, to cut short the argument, allow it to be so; and to what more will it amount, except that paper money had not depreciated in its exchange and dealings for silver? But this is only one of the articles for which it is exchanged in the daily business of life. Compare the £5 note in 1790 and the £5 note in 1812, with the different quantity of any goods it would command in the two periods. In 1790, we have seen a quarter [8 bushels] of corn sold at forty-two shillings, its current and ordinary price at that day. In 1814 and 1821 it would have taken the five pound note to purchase the same quantity. Eighty shillings, in short, five years hence, was what forty shillings were in our earlier life. In other words, the same sum of money now commands one half of what it purchased then, that is to say, prices have risen and money has depreciated in that proportion. The error and confusion arise in imagining that we here speak only of paper money, as if the depreciation were in the Bank note only, as compared with bullion money. But this is not the meaning of the proposition, that prices have risen from the depreciation of money. The meaning is, that from the abundance of money of all kind, paper and coin, during the long war, the value of money had so fallen in currency, that it required twofold the same quantity of money to represent the same value, or to speak less technically, money was so plentiful, and buyers so rich, that prices universally doubled. This is what is to be understood by the depreciation of money, and not any depreciation of the Bank of England paper, as compared with bullion. The depreciation of the Bank paper was very trifling, and as respected our internal currency, scarcely perceptible. The true depreciation is in the whole mass of money circulating through the kingdom, whether in coin or in bullion, but which mass was augmented in quantity by the accommodation system resulting from paper issues, as to render every component part of the whole of a proportionate less value. The guinea itself in fact was nearly as much depreciated as the Bank note. This must be constantly borne in mind, in order to have a clear conception of what is to be understood by the depreciation of money.

As respects the second point, that land can pay no rent, and is not worth its tillage, where the farmer has no rent to pay, it would seem almost too absurd to require an argument; yet does every page of the evidence make this assertion, and some of the witnesses even adduce whole columns of figures to prove it. It would not be fair, in an ordinary case, to examine the expenses of a farm by those of an acre of arable land; but under present circumstances, one extreme is best met by another. Now we will take an acre of land from before our own door, in a part of the country with which we happen to be as well acquainted as with the metropolis in which we are writing. The mere expense of cultivating this acre, breaking it up from a three years old grass lay, for wheat, three ploughings, harrowings, sowing, dung and seed; in short, the whole expense of its tillage, and afterwards cutting, carrying, and thrashing, would fall short of three guineas, tho' we were to hire any small farmer to do the whole work for us, and of course pay him a profit price, beyond his own cost in labor and horse work. Add four shillings for tithe, and four and sixpence for rates (which are the actual charge,) and the sum total of the expense of tillage is three pounds 13 shillings. Now what is the produce of this acre? The produce of the land in our eye, which happens to be good land, would be ten comb, or five quarters; but for the sake of fairness we will take it at three quarters and a half, which is nearly the average of the county through. The price of these three quarters and a half, at three pounds the quarter, would be ten pounds, ten shillings; that is to say, an increase of six pounds, seven or eight shillings, above the *actual* cost in tillage. It is true this is only upon the single acre; but this is enough to show the absurdity of the statement that land will not pay its tillage, which returns in the most careless and expensive cultivation (using hired work and horses instead of your own) ten pounds for three. In a word, the land, the corn, the climate, are the same now as in the days of our fathers, except that the productive powers of the soil are very nearly doubled in the county of which we are speaking, by skilful culture; and therefore, why, Mr. Curwen, should not the land still pay for its tillage? Because tithes are so high—But tithes are necessarily limited; they cannot exceed a tenth; and where (let us speak fairly) do they amount even to a fifteenth? But because taxes—We know not how it may be with you; but we have farms in our eye, of four and five hundred acres, which in this current year, 1821, do not pay twenty pounds more than was paid on the same farms in the year 1793 and 4. But then poor rates—Why, as to poor rates, the matter stands thus: in 1790, the rate was half a crown an acre; and in the current year it is four shillings, that is to say, a difference of seven pounds, ten shillings on the hundred acres. Do you mean to deny then, that the farmers are dreadfully oppressed? Certainly not: we mean only to assert, that the grievance is less in tithes, rates, and taxes, or in any increased expense of cultivating the land, than in what you landlords most studiously conceal, and in what the farmers themselves examined before the committee, under the apprehension of their respective landlords concealed too. We will inform you where the grievance lies—it lies in the high rents. We speak what we know, and what we would have asserted in favor of the farmers before the committee. If, instead of examining only land agents dependant upon themselves and capitalists, and in many instances, landlords themselves, they had called up a few practical men, who, with a due respect for the committee, but without any circumstance which should clap a muzzle on their mouth, would have shown them the question in its true shape, they would have known that this was the cause. The returns of farming in Norfolk and Suffolk—we mean the issues of the land above the expense of seed and tillage, exclusive of rent are, at the present prices, about two pounds, ten shillings per acre, the farm through. Now, if the landlord will take two pounds, or even thirty-two shillings of this two pounds ten, for his rent, the farmer can certainly only hardly live, if he can live on the small remainder, and can lay aside nothing of those profits to which he is fairly entitled. This is the cause of the present distress. Rents are, even in these counties, at thirty shillings, where they ought to be at twenty; and instead of reducing, permanently reducing the rent, the present practice is to take it in full, and then give a portion back, still reserving the same rent on the lease. But who can go on in this way? As farmers, we would not.

Culture of Carrots.

TO THE EDITOR OF THE AMERICAN FARMER.

Roxbury, March 10th, 1822.

Dear Sir,

In compliance with your request for my mode of cultivating and preserving carrots through the winter, I now enclose you the same—although, as a treasurer of the Massachusetts Agricultural Society, I have paid premiums for much larger crop than my own, where much more labor and manure was made use of, s you will see by referring to our Repository, of Oct. 1817, 1819, and 1820, when striving for premiums.

I am, Dear Sir, your's respectfully,

JOHN PRINCE.

For One Acre.

I always cultivate carrots on the deepest loamy soil, that has been previously under some hard crop for one or two years—then as early as your soil is fit, plough it as deep as the implement with a strong team will carry it; in a few days harrow it, and plough again to make it as fine as possible, and between the 20th May and 10th June, spread on 20 or 30 ox cart loads of about 30 to 35 bushels each of fine, old manure, and plough it in lightly, and harrow thoroughly, so as to be well mixed with the soil, and then brush, harrow and level it—if on a side hill, be careful not to have the rows *up and down*, as they are apt to wash, and by which I nearly lost my last crop; the field in which they were having a great many fruit trees, made it inconvenient having them any other way. The seed should be sown as soon as possible after levelling the surface.

Seed and Preparation.

I have always used for field culture the common orange carrot, and the seed should be thoroughly rubbed and winnowed, till all the rough edges are off, and finally made as clean as parsley-seed—then take about 1½ lb. and add warm water to make it fully wet, and turn it over occasionally for two or three days, till it swells and is on the point of sprouting; then mix with it hae a bushel of dry wood ashes, which allows it to be sown more freely and even; ½ a pound would b- an abundance if it could be sown as soon as wished, and all the seed were good.

Sowing, &c.

I have generally used the Northumberland turnip drill—any other machine may answer as well; only gauge it accurately, so that it be evenly sown, or it may be done by hand—we sometimes sow it in rows, three feet apart, if it is intended afterwards to sow Ruta Baga, Mangel Wurtzel, &c. &c. between it—but if alone, I should recommend 13 to 15 inches from row to row—the seed should be covered, and pressed down by the feet in following the machine, or by a light roller, (which I think important for almost all seeds)—and by treating the seed as before described, it vegetates and gets over the surface before the weeds, and is much more easily thinned and dressed out; the seed if sown in its dry state, is very slow in springing up, and the weeds generally get much ahead before the carrot is sufficiently visible, or is rooted firm enough to prevent being pulled up with the weeds.

Success in cultivating this vegetable, depends entirely on early attention and thinning, weeding and hoeing—the plants should not be left for a crop nearer than 3 or 4 inches, and should at all times be kept free from weeds, and the earth loosened with a hoe—(a Dutch scuffling hoe is very useful)—most of the labor after sowing may better be performed by children than men.

Harvesting and Preserving in the winter.

Carrots grow more in October than any previous month—the first of November is early enough to gather them; my method has been to cut off the tops near, but not quite to the crown of the plant, with sharp hoes; they are greedily eaten by oxen, cows, sheep, or swine—then run a plough deep, drawn by a pair of oxen or horses, as close to a row as can be directed, and down by another row a rod or two off, when they are seen standing very regularly, and are easily pulled by boys and thrown in heaps till carted off; by this method I think more than half the labor is saved and the earth is left in good order for the next season. I have succeeded perfectly in keeping them, as well as all other roots in pits, prepared as follows:—Dig the earth about one foot deep and four feet wide, of any length you please (but I should recommend not more than 150 or 200 bushels to be kept in one heap) and on a dry situatien, or a deep trench should be dug around the heap, at a small distance from it to keep off the water—then lay the roots on this ground, and pile them up about 3½ feet high—they should then be covered six to twelve inches with straw, meadow hay, or any such refuse article, and part of the earth which was thrown out, put on, only enough at first to keep down the straw—and as the cold weather increases, add more, till finally it may be eight to twelve inches thick, which is enough for our most severe winters—(as such a body of vegetables of themselves produce much heat,) they are more likely to be injured by being too warm, and especially when first put up. I have had them live in the ground where they grew, through the winter as well as parsnips. By the above management, I think 500 to 700 bushels per acre may be calculated on—and we have paid premiums for 960 bushels, where I presume no more pains were bestowed.

FOR THE AMERICAN FARMER.

FRUIT TREES.

Edgefield, South Carolina, Feb. 28, 1822.

" On Savage stocks inserted learn to bear."

There are few subjects more deserving the attention of the American agriculturist than the art of grafting, and few which are more unaccountably neglected. Not only to natural philosophers, but to whomsoever the works of naturalists can impart a charm; it must be pleasing to know something of that affinity in the saps of different trees, which qualifies one to bear the fruits of many, however widely differing in shape, size, and flavor. Thus every variety of plum, peach, nectarine. apricot, and almond will succeed well on the wild plum stock. The apple, pear, quince, medlar, service, and hawthorn, tho' differing with one another, will all agree to grow on the hawthorn, (*cratægus.*) The whole of the *Icosandria* class appears to discover a disposition to graft on each other. It seems somewhat derogatory to the character of American husbandry, that the third volume of the Farmer is nearly completed, and nothing like a lecture has yet appeared, upon an art, so productive of profit and pleasure. However desirable, I do not presume on the present occasion, to supply the deficiency here complained of. The very short time since my attention has been directed to the subject, forbids it; but my zeal in the cause, prompts me to begin, what I hope to see completed by an abler hand. Faith and philosophy appear to agree in the simplicity of the origin of all things.* From these premises we might conclude, that previous to all changes by accident or culture, all the fruits of earth might have flourished on one parent stock! Culture seems to have full as much influence as difference of genus. As the apple and pear, apple and quince, cherry and plum, and even the wild and tame cherry, will not graft together, although of the same genus; while the apple and hawthorn, peach and rose will succeed together, by grafting.† And I have been informed by practical grafters, that many varieties of cultivated apples refuse to grow on the wild crab stock. Philip Miller speaks of the wild cherry as a stock for the tame, but there must be a difference between his variety and that of this country; or a further change has taken place since his time, as I can assert from repeated trials, both by budding and grafting, that an union cannot be effected. And if there be not more of poetry than truth in Virgil, many trees which claimed kin when he wrote, disown it now. According to this view of the matter, in the ratio that the different genera of trees recede from their original condition, will be the difficulty of uniting them by art. Thus, though the cultivated apple and pear will not graft together, perhaps the wild apple and stone pear might; scientific gentlemen who have the opportunity, owe it to philosophy to make the experiment. There is something sublime in the idea, that the first cause should have left the fruits of the earth in their crude state, to be mellowed by the hand of man; that in effecting this salutary change, the conceit of his skill, by inciting exertion, should expel his inborn apathy so fatal to his happiness and glory. All the instructions I have ever seen on grafting, I know to be very imperfect. The old bungling method of applying three or four pounds of clay and stone-horse dung to the grafts, should have been long ago exploded.* The sole intention of a wrapper being to exclude the air from the wounds occasioned by the process, a cerate will answer the purpose far better, cheaper and neater; a piece the size of a hazel nut being generally sufficient. And after the grafts have made some little progress in uniting with the stocks, the wax may be collected for future operations.

Almost every publication which I have had the opportunity to peruse, directs one third of turpentine in the composition; of a grafting wax, this though very ductile and pleasant to use, I found certainly to destroy both grafts and stocks, as far as the wax came in contact with them. From the numerous respectable authorities recommending this wax, I was very liberal in its application to a number of choice grafts, without suspicion; but had the vexation upon the first inspection by removing the wax, to discover that a complete mortification had taken place under the wax; and even extending further in little lines along the grain of the wood. I separated the dead wood, and with a more friendly cerate, regrafted the surviving buds with success. Whatever may be the innocence of a wax containing one third turpentine in a northern climate, I was so well convinced from my trials of its deleterious effects in Carolina, as to reject it entirely. After many experiments to ascertain the best composition for a grafting wax, I prefer the following:—One measure of olive oil or hog's lard, 3 do. of melted bee's wax; mix well while hot, to be worked after it is cool, till sufficiently pliant. Perhaps sweet gum resin might form the basis of a more ductile wax, without imparting a destructive quality.—The following general rule may be observed by the noviciate in the science of grafting. All trees of the same genus, (not greatly altered by art,) will succeed together by inoculation. Those who have the opportunity and inclination to indulge in speculations on the production of vegetable hybrids* should try trees of the same class and order, or if differing in this particular, such as discover a similarity in the fruit, leaf, or sensible properties of the sap and wood, &c. Grafting is performed by making an operation upon the wood of the stock, to which is attached the cut of a twig from another tree, both wood and bark, with an indefinite number of buds.† Though March and April are the usual months for grafting, it may be protracted till May, and even June, perhaps with better success than earlier; by keeping the grafts in a degree of moisture which will just prevent their withering. The stocks should not exceed the size of a large goose-quill, but if they are old, select limbs of the same size; if there be none, head down the stock and wait till they come; the grafts will be more neat and valuable for the delay. The twigs should be selected for ingrafting when practical ble, from a young healthy tree, and to be as nearly as possible of the same size with their stocks. They should be cut before the buds have began to swell.

No other instrument is required than a sharp knife, with sufficient strength to perform the operation; a warm moist day should be preferred. Cut the stock off even and smooth, split about half an inch with the knife, cut off a bit of the twig to be grafted, with one or two buds, wedge shaped, having one edge thicker than the other, fit very exactly the edges of the wood on the thick side. Then cover as much of the graft and stock as was wounded in the operation, with as much grafting wax as will exclude the air. There are other methods of grafting in the wood, but the method here laid down being the most simple and certain of success, I think it useless to describe any other. But the season of grafting is somewhat short and precious, whilst that of budding is lasting and very certain. Moreover, many trees will bud perfectly well, which will not graft at all; as the mulberry, &c. Budding or inoculation is the very simple art of ingrafting one tree on another; by making an incision through the bark only of the stock, sufficient to make bare a small surface of the wood; while a little strip of bark containing a single bud of a size corresponding with the incision made on the stock, is fitted exactly and speedily on the spot of wood deprived of its original bark. Although midsummer is the usual time allotted for budding, it may be performed with success from the first of May, till the last of September, or even later. I think I have succeeded better in September than any month with such buds as had a sufficiency of sap to peal freely. And to insure success, I will here remark, that both grafts and stocks should at all times abound with sap. For early budding select a shoot of the preceding year's growth ; but if deferred to the time usually prescribed, (say midsummer) take the best grown shoot of the same year (with good prominent buds,) something larger than the size recommended for grafting. Cut out a little billet of wood about an inch long, having the bud in the middle ; now having placed it on the stock intended to receive it, mark the bark thereof with the knife at each end ; thus, I for the more precise fitting of the strip of bark to be introduced ; then make an incision quite through the bark without materially injuring the wood. Thus I now raise the bark with the thumb nail or point of the knife, and instantly apply the bark containing the bud, which may be conveniently separated from its wood by the thumb nail or point of the knife. Perhaps the operator will find it more convenient to cut out the billet opposite to the chosen bud. Thus the twig will now serve as a kind of handle to turn off the bud with more despatch and safety. But whatever method may be chosen for separating the bud, no time should be lost after having it adjusted, till it be close tied on with a woollen string, sufficiently strong for the purpose. Observing to wrap above and below the bud neatly, without compressing the bud itself. The strings should be smeared with grafting wax, which will make them better to tie, exclude the air, and remain sound for future operations. An evening or moist day should be preferred for this method of grafting also. One week is sufficient for the strings to remain, for if the buds have not effected their union in that time, they never will. If they do not appear withered at the time of removing the strings, or shortly thereafter, it may fairly be presumed they will live ; but if withered, the stocks may be forthwith rebudded. All the writers I have read on budding, state that the buds do not put out till the succeeding year ; until Mr. Andrew Knight recommenced the forcing of them by a strong ligature above the inserted buds, with the intent to check the flow of sap by them ; but afterwards removes the ligatures, lest they have too much sap. This appears to me like watering a plant till it has a good start, and then withdrawing our care.—After Mr. Knight has been at the trouble to remove his ligatures, he will find his initiated buds again checked, if not starved by the older branches drawing the sap from them. My method of forcing I deem to be far more simple : so soon as I ascertain my buds will live, which may be known in about a week, if the stock be small I instantly head it down, with one stroke of my knife, immediately above the bud I wish to nourish. If the stock be large, I amputate the principal branches ; the consequence is an immediate bursting of all the latent buds, together with the inoculated. As the ingrafted branches multiply, I diminish the number of the original ones, till nothing remains but the new tree ; nor will it be long, till "*ingens exiit ad cælum ramis felicibus arbos, Miraturque novas frondes, et non sua poma.*"

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* *See the writings of Moses, Linneus, Darwin, &c. &c.*

† *There is considerable difficulty in uniting the peach to the rose; but when done, the growth is as luxuriant and perhaps more hardy than from its own root.*

* *See Owen's Arts and Sciences, Miller's Gardener's Dictionary, &c. &c.*

* *A vegetable hybrid or mule, is more expeditiously produced by grafting different genera than by introducing to each other, the blooms of the different sexes. It is a fact in vegetable, as well animal physiology, that all mules are not barren. Thus the peach grafted to the rose, though in appearance a complete peach tree, bears roses only; nor can it be regrafted to either peach or rose. But the apple on the hawthorn is as capable of bearing fruit and regrafting as any other apple tree.*

† *I inserted some apple grafts about the middle of last November, the wounds have partially healed, and bid as fair to do well as spring grafts—grafting may be commenced as soon as the buds begin to swell, in spring.*

From this simple treatment, my buds will extend if inserted early, many feet, with numerous branches the same summer, and be prepared to produce a crop of fruit the ensuing year ; nay, more strange to tell, the same year in some instances.—Let the theorising orchardist who is fearful of a summer pruning, (because his books nor father's have not told him of it,) recollect what is the consequence of breaking a riding switch, or half the boughs of a tree being torn off by weight of fruit, or other accident. Whether is death the result, or a sudden production of numerous thriving shoots, in some cases gay flowers ? By the by, I think the growing season the proper time for pruning, and practise it accordingly. But whatever may be the principles of vegetable life, the buds of trees may be thus safely forced, and if they are not at some time, or other forced in the way here recommended, they will either never put out, or will put out only to starve ; and the sooner they are thus pushed the better.

Rees's Encyclopedia objects to the buds extending the same year in which they are inserted, on the ground that they will prove too tender to resist the shock of winter ; but these fears I can assert to be groundless ; the last severe spring put this matter fully to the test with me ; I had the buds of apricots, almonds, white walnuts, &c. in both states many which had not put forth, were completely destroyed, while those which had made progress resisted the storm.

The persimmon, (*Diospyros Virginiana*) and walnut, &c. will receive a tarnish on the surface of the wood, in a few seconds after the bark is separated from it. This is a chemical change in the sap, caused by its coming in contact with the air, which perhaps may defeat the operation and account for failures, and for the general opinion that these trees will not succeed at all.[*] But to insure success the operator must use the greatest dexterity ; having cut through the bark of the stock as before directed, separate the bark containing the bud to be introduced ; this done, keep it close pressed (without being moved from its wood) with the thumb and finger of one hand, while the bark is raised from the stock, with the other, having the string in readiness, instantly apply the bud and confine it according to art. Perhaps there is no tree more difficult to bud than the Persimmon ; but choice kinds may be sufficiently well propagated in this way. When budding the hickorynut, persimmon, chesnut, &c. grafting wax should be applied to the bud before it is confined with the string, and as much as squeezes out between the wrappings of the string, should be pressed down with the finger or thumb, so as effectually to exclude the air ; which will make the operation more sure, and prevent the depredation of small worms, which are liable to infest such trees under the inserted bark. This method of waxing should also be applied to the walnut and other difficult trees. The pecan (*Carya Olivæformis*) did not appear to take so well as the walnut, but my trials were made rather late in the season. I succeeded very well in budding the chesnut (*castania esculenta*) to the dwarf chesnut or chinquepin. (*Castania Pumilo*) but from a neglect of a timely waxing had them destroyed by worms. It seems to be a prevalent opinion, that buds cannot be separated for any length of time, from the parent tree without ceasing to vegetate. I kept some cuts of the almond, peach and apricot, nearly a month in moist earth, and budded them with success. They may conveniently be preserved for a few day's journey, in wet cloth. But unnecessary delays should, of course, be avoided. The art of budding and grafting, is particularly important in this country, where we have at command such a variety of hardy native stocks, and surplus land to devote to trees. The persimmon bears a fruit replete with sugar, which is never injured by frosts, resists rot perhaps better than any other fruit ; is a very great bearer, and will flourish without cultivation, on the poorest soils, whether of sand or clay, wet or dry. The wild plum will also grow on very poor land, and is durable ; but grows too slow in general for a nursery stock : it should have attained a sufficient size previous to grafting (say three or four inches in diameter) to keep pace with the rapid growth of the peach and some plums—remembering always to insert the buds or grafts, as close as possible to the trunk, or a large limb. Under these circumstances the wild plum will be found an excellent stock for an extensive tribe of delicious fruits. The same remarks will apply to the elegant parsley leaved hawthorn when used as a stock for the apple, pear, &c. ; another advantage this stock (hawthorn) also has of the apple and most of the other hawthorns, it is very hardy, little choice of soils, and is never plagued with moss, as it sheds its old bark annually. Gentlemen, whose land abounds with these hardy native stocks (instead of considering them a nuisance,) might, by selecting the hardiest and richest fruits for grafting, with a small portion of time and expense, have a profusion of them highly important to man and beast.[*]

I hope the readers of the Farmer will not be illiberal in communicating the result of their enquiries to the public, to whom they owe a debt, for reading your paper, which can only be discharged with intellectual coin ; and let the miser in knowledge recollect, that it is a dark body indeed, which is always imbibing light without reflecting any. Nor can I dismiss this subject without inviting the attention of the ladies thereto ; if the tree of knowledge was forbid them, this book of knowledge is not. Surely to know something of grafting is more worthy of their regard, than many of the transient amusements of fashion. Human fashion, like a Proteus, ever changing ; what is taste to-day is ridiculous to-morrow. But, the fashions of Nature are eternal as truth, and bestow blessings with an unsparing hand, on those who search them out ! The rose will not only graft and bud well to its genus ; but will take on those of a different one, by which the plain fruit tree is converted into an inimitable flowering shrub. This art being equally applicable to the propagation of flowering shrubs, as fruit trees, would add much to the flower garden. Perhaps there is no employ or amusement better calculated to wean the mind from sorrow, than this truly innocent one : and while it affords a present enjoyment, awakens the hope of more in future. After what has been written, shall I attempt an eulogy on an art, which enables us to collect from all quarters of the world (climate not forbidding) the most choice fruits, and plant them on stocks hardy and mature, capable of affording as much fruit in two or three years as the seed would yield in a dozen or more. And who can deny, from our present imperfect knowledge of grafting and the hardy hybrids producible thereby, but that trees, destined to eternal barrenness, may be burthened with the produce of the palm, the olive, or the bread fruit tree? We have seen the peach "blossom as the rose;" and with our present knowledge of the principles of ingrafting, it is practicable for every moderate farmer, by devoting to the exercise of this art, the time he is wont to sacrifice to inglorious sloth, or criminal amusements; to create a paradise of fruits and flowers, where thorns and briars now grow but to curse his land.

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[*] *Rees' Encyclopedia says, the mulberry, fig, and walnut, will only ingraft by inarching ; and Philip Miller, a very celebrated English gardener, says the apple will ingraft on none, but its own stock : but these are the mistakes of great men. I don't believe there is any tree that will bud more successfully than the mulberry : the walnut tolerably well, and from the few trials I made with the figs, I am induced to think there may be no difficulty with that. I budded some mulberry buds on the 11th of June, and by the 29th of August I measured one upwards of a foot in length, with ripe fruit.*

Mr. Robert Lofton, living a few miles from Edgefield Court House, has ingrafted apple trees which he says have flourished upwards of 20 years upon a variety of indigenous hawthorn. I have been informed of another instance in the same district ; and I have myself very luxuriant grafts on the parsley leaved hawthorn, which produced apples large, delicious and uncommonly sound.—The most prolific source of ignorance and oppression is that of suffering great men to think for us. Crippled indeed would be the operations of nature were they controlled by the theories and conceits of the wisest man.

[*] *In the spring of* 1821, *I transplanted some wild plum stocks, from 2 to 3 inches diameter, close pruned, whereon I grafted some peaches, plums, &c. I counted, in the fall of the same year, on a single graft,* 228 *flower buds.*

This communication has spun out to a much greater length than I intended, at the commencement; but in the progress I thought, as encyclopedias and dictionaries of arts and sciences, &c. were not accessible to all your readers, it might not be amiss to describe the processes at length. However, if you find fault of the length, you can prune the superfluous shoots, or make any disposition of it you think proper.

I will trespass no further on your patience, than to wish you all the success your zeal has merited.

ABNER LANDRUM.

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FOR THE AMERICAN FARMER.

Mr. Skinner,

Dear Sir,—I have observed in the American Farmer, Number forty-seven, an enquiry made by a Virginia farmer, for information as to the best means of preventing hogs from being infested with vermin, and how to destroy them when they are infected.

The means I use is nothing more than a little tar and grease of any kind, sufficient to make the tar quite thin, then pour it over the hogs when fed, sufficiently, so as to have them well smeared with the tar; this may be repeated often in the summer and fall, as I conceive it to be an excellent thing for the health of the hogs—or in good weather, you may give each hog a small table spoonful of sulphur in their food, or in damp weather, have them well sprinkled with strong wood ashes; either of these remedies will prevent or destroy the vermin.

Your's, very respectfully,
JOSEPH W. BALLARD.
Mount Pleasant, Isle of Wight County, Va.
March 11*th*, 1822.

THE FARMER.

BALTIMORE, FRIDAY, MARCH 29, 1822.

MR. BIDDLE'S ADDRESS.

Some of our best friends, for whose judgment we have great respect, have expressed a desire to see the pages of this journal enriched by the excellent address of Nicholas Biddle, Esq. to the Agricultural Society of Philadelphia. In this desire we heartily concur, and propose to publish it in an early number of this volume; we have the less occasion to regret the delay in its appearance, since it has been given to the public through the medium of several highly respectable newspapers. Mr. Biddle has broken new ground, and illustrated new topicks, in a manner well calculated to display the beauties, to assert the dignity, and to demonstrate the sober gains of Agricultural pursuits—when prosecuted with enlightened industry.

CLOVER SEED MILL.

The attention of our readers, resident in clover growing districts, who may be proprietors either of Water or Horse power Mills, is particularly called, to the advertisement of Mr. Bolton's Clover-Huller, on this page: its cheapness, when appended to a pre-existing Mill, should lead to an extensive use of it, if the inventor's impressions are justified by actual experiments; and of this, he very fairly offers to others an opportunity to judge for themselves, before they *completely purchase* the right to use his patent privilege in their own neighbourhoods.

◆

PRICES CURRENT, CORRECTED WEEKLY.

Flour from the wagons, superfine, $6 to 6 1-8—Wharf flour $6 per bbl.—Wheat, white, 133 to 135 cents—Red, 130 to 132—Corn, white, 70 to 71—yellow, 64 to 65—Rye, 65—Barley, 60—Oats, 35 to 45—Beans, 130 cents per bushel, wholesale—Whiskey, 26 cts. per gall.—*Grass Seeds*, Clover, $8—Timothy, $5—Orchard, 3½—Herds, 3 per bushel, at retail—Salt, coarse, 54 to 65 cents—Liverpool ground, 50—do. fine, 40 to 44 per bushel—Plaster of Paris, ground, $7 per ton or 125 cents per bbl.—Mess Beef, $11—do Pork, 13—Herrings, 2½ to 2¾—Shad, 5½ to 6 per bbl.—Codfish, 3 to 3½ cts.—Hams, 11—Cheese, 11—Butter, 20 to 25 per lb.—Eggs, 10 to 12 cents per doz.—Wool, 20 to 50—Cotton, Georgia Upland, 15 to 17 cents per lb.—Louisiana or Alabama 18 to 20—Feathers, 40 cts. per lb.—Tar, 175 cts.—Turpentine, 175 to 200—Rosin, 150 per bbl.—Spirits of Turpentine, 45 to 50 cents—Varnish, 30—Linseed Oil, 75 to 80 per gallon—Tobacco, Maryland, fine yellow, none—good do 16 to $18—spangled, 13 to 15—good red, 6 to 8—common, 3½ to 5—seconds, 1½ to 4, per 100lbs.

THE LINNÆAN GARDEN,

FLUSHING, Long Island,

WILLIAM PRINCE,

Proprietor, has recently enriched its collection by the acquisition of a very large number of NEW FRUITS, as well as ORNAMENTAL TREES and PLANTS, from the Royal Gardens at Paris, and from the most celebrated collections in Holland, Germany and England.

☞ Catalogues, with all the recent additions, may be obtained, *gratis*, of the subscriber, who is agent for receiving orders for the proprietor.

CHARLES R. PEARCE,
68, Bowly's wharf.

March 21.

CLOVER SEED MILL.

A cheap, expeditious and effectual mode of cleaning Clover Seed, has long been a desideratum among the cultivators of the soil. Various means have been adopted for the purpose, but all defective in the most material points; especially in the grand points of cleanliness, economy and dispatch. The subscriber flatters himself that he has remedied these defects by means of his newly invented machine for cleaning Clover Seed—for which he has obtained a Patent, and the practical operation of which he is desirous, as well for the prosperity of the Agricultural Interest, as for his own emolument, of extending throughout the Union. He is well aware of the many impositions which have been practised by means of imperfect inventions of labor-saving machinery; and is willing, therefore, that the utility of his machine shall be fairly tested by all who may feel disposed to purchase the right of using it, before the completion of any contract for such right.

This machine is very simple and cheap, as well as durable. When applied to the spindle of a plaster or grist mill, with the necessary water power, the huller or grinder will cost from thirty to forty dollars. It will then clean 5000 bushels of seed, at the rate of one bushel an hour, with an expense of less than five dollars for repairs. It may be put in operation by a horse power, so as to clean from three to five bushels per day; but a water power is to be preferred in all cases where it can be conveniently obtained.

It is unnecessary to enlarge upon the utility and importance of such a machine, to the Agricultural Interest. Every farmer can appreciate, at once, the advantage to be derived from it, in preparing his seed for his own use, as well as for market.

Any person who may wish to purchase a town, county or state right, in said invention, will please address the subscriber, at Warren, Herkimer county, N. Y. before the first of June next, as between that period and the first of September, he will be absent. His terms will be moderate, but ready pay will be expected. He will furnish every necessary information by letter, or attend himself, if required, as he calculates to devote his whole time to the business.

JOHN BOLTON.
Warren, Herkimer Co. N. Y. March 20, 1822.

SEED STORE,

Roger's Alley, one door West of the Post Office.

WILLIAM F. REDDING, agent for STEPHEN MUNSON, of *New Lebanon, New York*, respectfully informs the public, that he has just received for sale, a very valuable assortment of KITCHEN GARDEN and other SEEDS, neatly put up in convenient parcels, with the retail prices annexed, among which are the following:

[The seed mentioned below, were selected on the spot where they grew last summer, by Mr. SKINNER, Editor of this paper; for the particular benefit of his subscribers; he authorises me to say, that they may be relied upon, as being sound and genuine of their kind.]

White Onion
Yellow do
Red do
Blood Beet
Scarcity do
Turnip do
Flat Turnip
Carrot
Parsnip
Early Cucumber
Cucumber
Long Cucumber
Scarlet Raddish
Salmon do
Yellow Swedish Turnip
French do
Early Curled Lettuce
Ice Lettuce
Head do
Early Cabbage
Drumhead Winter Cabbage
Savory Cabbage
Red do
Early frame Pease
Early Hotspur do
Large Sugar do
Early China Beans
Early Cranberry Beans
Large Lima Beans
Small Lima Beans
Early Whites
Sage
Summer Savory
Burnet
Red Pepper
Asparagus
White Celery
Water Melons
Muskmelon
Winter Crookneck Squash
Summer Scallop Squash
Pepper Grass
Parsely
Saffron
Rue &c. &c. &c.

☞ Orders from any part of the country, addressed to WM. F. REDDING, office of the *American Farmer*, will meet with prompt attention.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, at the North West corner of Market and Belvidere-streets, Baltimore, *where every description of Book and Job printing is executed with neatness and dispatch*—Orders from a distance for Binding, with proper directions, promptly attended to.

&c. &c.

AGRICULTURE.

The Cottager's Manual,

FOR THE MANAGEMENT OF BEES THROUGHOUT EVERY MONTH OF THE YEAR.

To the president, vice presidents, the treasurer, and members of the British Apiarian Society, who, by their laudable endeavors, have encouraged the culture of the Bee, amongst the cottagers, this manual is dedicated, with feelings of the most profound respect, by their secretary.

[CONTINUED.]

JANUARY.

The Bees will be found more or less active this month, according to the openness of the season. Should the Bees be seen on a fine day flying abroad in great numbers, and making a humming noise, you may rest assured that your hives are in good health, and the less they are molested the better. At all events, should any accident occur which renders it necessary to inspect the inside of the hive; be sure and choose a fine dry day for the purpose, for humidity destroys more hives than cold.*

Be particular in brushing off the snow from the hives—never allow it to dissolve upon them—for it will penetrate to the interior and spoil the combs, and the Bees will forsake the hive.

An opportunity must be taken of a fine day to inspect the hives, and in those cases where the Bees are in the common hive, it should be turned up and the stool well cleaned. A renovation of air in the interior of the hive, will be of great benefit to the Bees, for as there are no evaporators in the common hive as there are in the Huish Hive, the foul air which has been gathering during the winter, has not been able to find a vent, and becomes at last highly prejudicial to the Bees; were the hives to remain an hour turned up, and the Bees wholly exposed, it would rather be an advantage than an injury. I am inclined to believe that the dysentery amongst Bees is caused more by the respiration of the foul air generated during the winter, than from any other cause, although it be certain that it can be brought on by unwholesome and infected food.

The state of health of the Bees can in some degree be ascertained by the symptoms of anger which they display on lifting up the hive. If a rustling noise be heard amongst them, and a sudden jerking of the wings, as if attempting to fly, it may be concluded that the community are in good health. The odour which issues from the hive immediately on raising it, is also a criterion by which to judge of the health of the Bees. It is, however, difficult to describe the distinctive qualities of this odour, and the only sure method for the inexperienced apiarian is to draw the comparison between the odour of a diseased hive, and that of a sound one. That of a diseased hive partakes strongly of the smell of putrified objects, but not of an animal nature,—that of a sound hive resembles the smell of heated wax, partaking, at the same time, of the fragrance of honey. But one of the surest criteria to discover the healthy state of the Bees, is to catch two or three and to kill them; if the substance in the stomach of the Bee be of a yellowish color, divested of a fœtid smell, but partaking of that of honey, the Bee may be considered, as far as the dysentery goes, to be in good health,—but if the substance be blackish, accompanied with a putrid smell—the Bee is evidently in a diseased state. If, further, some blackish spots, resembling small linseed, be perceptible on the stool, in a state of desiccation, it may then be considered as certain that the Bees are in an unwholesome state. No time should then be lost in administering to them some food, in which an extra quantity of salt has been mixed, with a glass of port wine; but should that not be within the reach of the cottager, some diluted brandy will be equally efficacious, and a little salt may be sprinkled amongst the Bees. This malady of the Bees arises frequently from the honey being deposited in old and infected combs, which, turning acid, occasions that disagreement in the digestive organs, which ends at last in the dysentery. Another cause is the old and musty bee-bread which is the usual concomitant of old combs. Nature has indeed wisely taught the Bee to provide against the bad effects of putrid bee-bread, by the particular art which the Bee displays in filling a cell only half full of bee-bread, and the other half with honey—thus in some degree providing against an admission of air to the bee-bread, but the honey itself becomes in time contaminated with the deleterious nature of the bee-bread long kept in the cells, and unless due vigilance be used on the part of the apiarian, the destruction of his hives will be the result. It is very difficult to prescribe any method by which the combs can be renewed in the common hive, and by which it would be divested of the infectious bee-bread; how is a person, not over skilled in the operative departments of the science, and perhaps not skilled at all, to penetrate to the top of a common hive, to divest it of a piece of infected comb?—how is he to ascertain in what particular part of the hive the infected combs actually exist? And perhaps, after having cut out one comb, he may find himself in the situation of the dentist who, through ignorance, has extracted the sound tooth for the unsound one.—Thus the common hive presents those insuperable difficulties to the proper management of Bees, that I am not so much surprised at the smallness of the success which the cottagers have in this, to them, most interesting branch of profit; but my surprise is great that they have any success at all.—They cannot be supposed to possess an intuitive knowledge of the niceties of the science,* and all the skill which they do possess, appears to have been inherited from their grandmothers and great-grandmothers, who wisely concluded, that if they placed their hives in a garden—they had nothing more to do than to watch their swarms, and then to suffocate them—and should any disaster befall their hives—their want of management and skill was the last thing which entered into their heads; their son or daughter had seen a witch riding through the air on a broomstick, and the Bees had *certainly* been killed by the indignant hecate.

How different is the method of management in the Huish Hive: the infected combs may be examined and extracted; every part of the hive may be most minutely inspected—every comb may be taken out, the old ones rejected, and the sound ones replaced in their original position.

Delay not every morning to brush off the snow from the hives, which may have fallen during the night. Cottagers in general entertain the idea that snow keeps their hives warm;—supposing this to be the case, it would be no benefit to them, but the injury sustained by a hive, from the snow melting on it, is irreparable.

FEBRUARY.

This may be called the first month in the year, in which the labor of the Bee commences. The crocus, the furze, and the sallow are in bloom, and tempt the Bee on the first indication of genial weather, to resume its labors. It must, however, be taken into consideration, that the flowers which are now in bloom, yield little or no honey; the Bees are, in a certain degree, roused from the torpor of the winter, and the consumption of the food in the hive becomes considerable. In the common hive it is only a very skilful person, who can ascertain the actual existence, or the quantity of food in the hive, by occular examination; some idea may indeed be formed by the weight, but in an old hive, it is in general a very fallacious criterion, on account of the superfluity of bee-bread, which is universally found in hives of two or three years' standing. Thus many persons are deceived into a false security, in regard to the internal state of their hives, and ruin is then the consequence. On the other hand, in the Huish Hive, an almost exact estimate may be formed of the quantity of honey, by inspecting it at the top; and if a number of cells are seen sealed up, it may be safely determined that the Bees are not in actual want of food; let me, however, strenuously advise every one to take the advantage of a fine day, and administer a plate full of syrup to every hive. Be not deterred by the ridiculous idea, that feeding Bees makes them lazy. I have always found the contrary to be the case, and if a little port wine be incorporated with the food at the commencement of the season, the dysentery may be prevented, which, in all cases, is better than a cure. A partial feeding of the Bees in this month will accelerate the swarms, by exhilarating the Queen to begin the laying of her eggs at an earlier period than she otherwise would have done.

The stools must this month be cleaned from all the dirt which may have accumulated, and the bottom sprinkled with salt. A hive may be kept in good health by a liberal distribution of salt, and no food should be administered to Bees without a due proportion of it.

The entrance to the hive may, this month, be a little enlarged,* and in the middle of the day, when the sun shines bright, both the tin sliders may be drawn up; for as the Bees, supposing them to be in a healthy state, will now take their periodical flight, a contracted entrance is highly prejudicial to them. It is certain that many hives are annually lost, from a total negligence or inattention to enlarging or diminishing the entrance of the hive, according to the existing circumstances of the case. Indeed most people are not aware of, or are actually ignorant of the advantages resulting from a due attention to this apparently trifling point of apiarian science; but I am certain, that a person has only to attend minutely to the state of two hives, one of which has been managed with a due regard to the entrance, and the other with a total neglect of it, to be thoroughly convinced of the justness of the advice which is now given. In the fickle climate of England, the temperature of the day in the month of February, may be warm and genial, and the following morning may see the earth covered with snow; in this case, the skilful bee-master will lose no time in confining his Bees altogether, by letting down both the perforated sliders—but how is this to be effected with mortar or clay? The entrance must be either completely closed, which is highly detrimental to the Bees, or so much of the entrance must be left open as to permit the egress of the Bees, in which case the death of hundreds will be the consequence.

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* *I wish it to be established as a principle, that no cold of this climate can be prejudicial to Bees. Indeed I rather consider it to be beneficial to them. The greater the cold—the greater the torpor of the Bees—and the greater the torpor, the less the consumption of honey by the Bees, and this is no trifling advantage in a climate, the summer of which is not always congenial to the collection of honey.*

* *I should wish to see established in this country, the Bee Gardens similar to those in the Austrian Empire, which are under the management of a skilful Apiarian, and which are open to all classes of people, but particularly the peasants. Particular days are appointed on which a person lectures on the management of Bees, and thus a seminary is formed in which the cottager is taught the minutiæ of the science, and all the most difficult branches of the art. An Austrian in Germany is thus as proverbially noted for his excellence in the management of Bees, as a Scot in England, in the management of a garden.*

* *I wish it to be distinctly understood, that in speaking of contracting or enlarging the entrance to the hive, I suppose that the proprietor has in use the tin entrances which are attached to my hives, but in those cases where the tin entrances which are not used, the hole made by the mortar or clay forming the substitute, must be increased or diminished according to the circumstances of the case.*

Should the situation of the apiary not offer the indispensable requisite of water, the bee-master must now begin to take care that troughs of water be placed in the vicinity of the hives. It will, however, sometimes happen, that the water placed on the preceding night, will be found, at this season of the year, frozen in the morning; this water should be immediately removed, as melted ice is highly injurious to the Bees.

MARCH.

The beginning of this month is the proper time for extracting from the Huish Hive, any infected combs which may be perceptible in it; the method of which is so fully and minutely detailed in the "Instructions for the Use and Management of the Huish Hive," that a description of it here, would be considered superfluous. Some Queens, however, being more early than others in laying their eggs, some judgment is necessary in regard to those combs, in which she may have deposited the few eggs of the season—the Queen does not run from comb to comb to deposit her eggs, but having commenced the laying in one comb, she proceeds from cell to cell, until every one contains an egg—and she generally begins in the middle of a comb. In taking out a comb, therefore, particular attention must be paid to discover if any eggs have been deposited in the cells, and if any be found, the comb should be returned, and not meddled with again until the close of the season, when it should be taken away altogether.

Some hives may be found this month in a very weak and languid state, which no food can exhilarate, nor the utmost art of the proprietor excite to vigilance and activity. The Bees will dwindle away by degrees, until the hive becomes wholly abandoned. This is an infallible sign of the barrenness of the Queen, or that the hive is wholly divested of any fecundated eggs of the preceding season—in this case, the proprietor should immediately proceed to join the Bees to the weakest stock hive in the apiary. If the Bees be in a Huish Hive, the operation is very simple. Take off the straw cover, and the folding wooden top of the hive to which the Bees are to be joined, and place the other hive on the bars; then procure some dry leaves or tobacco, and give the Bees of both hives a slight fumigation—plaster the uppermost hive well round the bottom, so that no Bee can get out, except through the entrance of the lower hive. Some little fighting may take place, but in a few days the massacre of one of the Queen Bees will have taken place, and the united assembly will then begin to work as one family. Should the Bees be in a common hive, the operation is more difficult, and is attended with those obstructions which deter many persons from attempting it. The top of the hive to which the Bees are to be joined must be cut off, and the combs laid bare; this, however, is no easy task, as the combs are all attached to the upper bands of the hive, and this separation occasions, not only a fraction of the combs, but fills the hive with filth and dirt—the weak hive must then be placed upon it, and plastered round the bottom—the same system of fumigation must be adopted as with the Huish Hive—and the benefit of the union will soon be perceptible, from the increased activity of the Bees.

In the feeding of the weaker hives, particular care must be taken this month to avoid all robbery from stranger Bees. At this season the best period for feeding is the evening, and on the following morning to take away the surplus food, and restore it again in the evening. The sense of smell is so acute in the Bee, that it immediately scents the food which may be placed in a hive, and an attack upon it is generally the consequence.

This month the tin sliders may be drawn away from the entrance, and the Bees may have the advantage of its full extent; providing at the same time against those casualties, from which the apiary is never exempt, but in the regulation of which, the prudence and skill of the proprietor must be put to the test, according as the circumstances arise.

This is a good month for the purchase of stock hives—as they have weathered all the casualties of the winter, and little fear need now be entertained of famine.

The warmer the hives are now kept, the better, as it accelerates the hatching of the eggs, and promotes the prolific nature of the Queen. Some young Bees may now be perceived in the hives, and they are told by being of a greyish color, and are seen running about in front of the hive—the old Bees will be seen cleaning them with their proboscis, and in a few minutes they will take their flight into the fields.

(To be continued.)

FROM A SUBSCRIBER AND CORRESPONDENT.

Loudoun County, Va.

To the Editor.

SIR—I have taken the liberty of enclosing you the result of an experiment, made in the use of *Candles:* one of which was made with a *wooden wick*, the other in the usual way, with cotton. The candles were made at the same time, moulded in the same sized moulds, of exact equal weight, both set on fire at the same moment, and placed upon the same table. That which was made with a wooden wick, lasted seven hours—the other five; affording equal light.

The size of the candles were about six to the pound; the wood used was a part of a cypress shingle, and prepared after the following manner, to wit: The wood was split to the size of rye straw, and made round, so that the coat of cotton, which was applied, might be more easily put on by rolling the stick upon a card which contained the cotton, which had been previously well carded. The stick was then rolled upon a table, to cause the cotton to adhere closely, and then was about the size of a common quill—it was then placed in the mould and the tallow poured in. The stick must be somewhat longer than the mould, as the candle must be drawn with pincers.

Agreeably to the foregoing experiment, a pound of candles will last forty-two hours, when they would only last thirty, made after the usual way.

One pound of raw cotton is sufficient (with the wooden wick) for 160lbs. of candles. Another great advantage in using the wooden wick, is, that the candle will not fall in warm weather, nor will it be so easily affected by the air.

If you think proper to give the above to the public, through your widely circulated and very useful paper, I shall be pleased; convinced as I am, of the great advantage which will be derived from the use of wooden wicks, generally.

The idea is not original with me, but derived from the 1st vol. of the Domestic Encyclopædia, page 497. W. B.

March 1, 1822.

ON THE USE OF JUNIPER RAILS.

Stevenson's Point, Perquimans County, N. C.
March 7th, 1822.

Dear Sir—It is my misfortune, *perhaps*, to be without timbered land convenient, to this farm, which has reduced me to the necessity of purchasing where I can get timber more conveniently, and called my attention particularly to my fences. A good fence or hedge I look upon as important, comparatively speaking, to an agriculturist, as a strongly walled city to the besieged, or a faithful centinel to an army, in an enemy's country.

This winter I have met with an opportunity of purchasing about ten thousand ten feet juniper rails; which has enabled me to give my fencing a thorough examination and repair, in which I have become so completely reconciled with my purchase of rails, that, for the future, I now think, I shall purchase none but of that description. The former owner of this farm was induced, about twenty-five or six years since, to try the "post and railed" fence, with double ditches, and for that purpose procured a quantity of juniper rails. The fence upon that plan, not answering his expectations, as I am informed, inasmuch as the hogs broke through or undermined it, he pulled it down, and used the rails in the ordinary way. Now, sir, to my surprise, at this time, after a use of twenty-five years, at least *twenty of which, this farm has been rented or leased out*, I find these rails nearly as sound and firm as they must have been the day they were put in use! Many have the bark on them, apparently as fresh as ever, and but few in a state of decay! And to this, sir, permit me to add, that I am informed, there are rails of this description, in an adjoining county to this, which have been in use for sixty years, and are yet faithful, though venerable, centinels! The intelligent farmer will, at once, perceive the many advantages derived from a fence of this kind: there is the expense of annual repairs, the saving of timber, more valuable for other purposes, and now in some parts of our country becoming very scarce, the saving of labor, which can, in other ways, be advantageously employed, and the great ease with which these fences can be removed, &c. &c. Further comment is deemed altogether unnecessary.

Ten feet juniper rails are purchased in the county of Tyrell, delivered on the water, as I am informed, for twelve dollars and fifty cents per thousand—they are "bulky," and stow badly, consequently a vessel will carry but few, and the freight is high. The price of such rails here, a distance only of about twenty miles, is from eighteen to twenty-five dollars. They are light and easily blown down, and should only be put up with upright stakes, pinned at the top,* and the pannels only sufficiently crooked to keep them from washing down by the side of each other—the stakes should be set about two feet in the ground, one hole answering for both; fer which I have substituted the largest rails, leaving the whole length, in order to use them again when they may rot off, which I am informed will be in about five years. Twelve hundred juniper ten feet rails, such as I have purchased, will make a fence of one hundred pannels, ten rails, or five feet high; over which, I venture to say, the most mischievous creature, cannot leap, and reaching two hundred and eighty strides or yards.—I have no doubt but that the cypress will answer equally well.

I am, sir, your constant reader, and
very humble servant,
JON'A. H. JACOCKS.

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* *My fence, upon this plan, stood the late September storm, and was the only fence on the plantation that was not laid prostrate. The rails are called ten feet, but are about ten and an half—the smallest are selected and put at the bottom, otherwise pigs might find their way through.*

STATISTICAL VIEW of the Commerce of the United States, exhibiting the value of articles of every description of Imports from, and the value of articles of every description of Exports to, each foreign country; also the Tonnage of American and foreign vessels arriving from, and departing to, each country, for the year ending 30th September, 1821.

	COMMERCE.										NAVIGATION.			
	VALUE OF IMPORTS.			VALUE OF DOMESTIC EXPORTS.			VALUE OF FOREIGN EXPORTS.				AM. TONNAGE.		FOR'N. TON.	
	In American vessels.	In foreign vessels.	Total.	In American vessels.	In foreign vessels.	Total.	In American vessels.	In foreign vessels.	Total.	Total value of domestic & foreign produce exported.	Entered into the U. States.	Departing from the U. States.	Entered into the U. S.	Departing from the U S.
Russia	1,852,199	-	1,852,199	127,939	-	127,939	500,955	-	500,955	628,894	13,827	4,521	-	-
Prussia	-	1,399	1,399	-	-	-	-	-	-	-	-	-	726	-
Sweden	658,335	101,418	759,753	106,219	47,994	154,213	16,526	46,442	62,968	217,181	10,772	1,616	1,188	964
Swedish West Indies	601,706	8,410	611,116	497,267	9,810	507,077	47,344	5,805	53,149	560,226	13,083	20,774	363	888
Denmark and Norway	16,156	-	16,156	165,568	-	165,568	360,535	-	360,535	526,103	1,421	4,142	-	-
Danish West Indies	1,958,738	24,836	1,983,574	1,299,466	16,830	1,316,296	485,483	-	485,483	1,801,779	39,407	46,299	1,689	633
Holland	1,788,754	150,199	1,938,953	1,873,873	80,640	1,954,513	1,706,593	33,099	1,739,692	3,694,205	25,851	26,048	1,403	1,063
Dutch West Indies and American colonies	833,757	27,193	860,950	520,285	12,974	533,259	147,861	1,923	149,784	683,043	16,468	18,223	422	823
Do. East Indies	134,369	-	134,369	133,010	-	133,010	1,581,803	-	1,581,803	1,714,818	1,597	5,610	-	-
England, Man, and Berwick	21,691,813	1,489,049	23,180,862	13,895,527	2,443,382	16,339,109	2,056,408	69,186	2,125,594	18,464,703	112,553	128,729	39,024	19,546
Scotland	865,173	354,919	1,220,192	448,459	956,989	1,405,448	858	12,825	13,683	1,419,131	4,737	4 015	7,232	6,220
Ireland	533,756	152,398	686,154	715,006	174,571	889,577	850	3,219	4,069	893,646	9,479	12,812	3,018	2,201
Gibraltar	1,032,564	201,699	1,234,263	956,111	-	956,111	513,635	-	513,636	1,469,746	11,231	20,954	435	-
British African ports	6,581	-	6,581	9,953	-	9,953	5,013	-	5,013	14,966	376	200	-	-
Newfoundland and British fisheries	213	-	213	260	-	260	4,478	-	4,478	4,738	448	501	-	-
British East Indies	1,530,799	-	1,530,799	32,089	-	32,089	1,934,190	-	1,934,190	1,966,279	4,548	3,027	-	-
Do. West Indies	646,395	280,951	927,346	264,632	-	264,632	470	-	470	265,102	32,631	22,083	-	-
Do. American colonies	459,490	31,214	490,704	1,959,271	50,065	2,009,336	227	228	455	2,009,791	110,821	112,223	405	3,169
Other British colonies	-	924	924	12,113	-	12,113	2,357	-	2,357	14,470	796	874	-	-
The Hanse towns and ports of Germany	763,869	226,296	990,165	1,331,179	204,327	1,535,506	542,321	54,717	597,038	2,132,544	14,524	17,308	4,180	4,091
French European ports on the Atlantic	4,079,330	414,587	4,493,917	44,933	5,053,910	5,098,843	-	349,010	349,010	5,447,853	11,431	798	11,273	36,392
Do. do. do. Mediterranean	434,311	61,712	496,023	29,868	39,987	69,855	6,073	4,778	10,851	80,706	3,700	316	838	593
Do. West Indies and American colonies	900,619	-	900,619	846,597	-	846,597	49,838	-	49,808	896,435	41,729	4,366	-	-
Do. East Indies	-	-	-	5,784	-	5,784	1,784	-	1,784	7,568	-	144	-	-
Bourbon and Mauritius	10,022	-	10,022	19,600	-	19,600	22,556	-	22,556	42,156	194	337	-	-
Hayti	2,207,559	38,698	2,246,257	1,721,839	18,544	1,740,383	529,579	639	530,218	2,272,601	49,139	46,171	980	547
Spanish European ports on the Atlantic	242,057	11,968	254,025	324,706	-	324,706	189,900	-	189,900	514,606	6,585	8,604	-	-
Do. do. do. Mediterranean	280,376	7,992	288,368	24,225	-	24,225	915	-	915	25,140	4,747	1,174	563	-
Teneriffe and the other Canaries	265,089	-	265,089	74,828	-	74,828	48,637	-	48,637	123,465	2,329	3,003	-	92
Manilla and Philippine islands	114,861	-	114,861	1,359	-	1,359	209,964	-	209,964	211,323	742	632	-	-
Floridas	174,860	14,870	189,730	292,805	7,443	300,248	43,589	5,933	49,522	349,770	9,032	9,341	450	320
Honduras, Campeachy, &c.	210,673	5,402	216,075	96,553	3,342	99,895	106,091	739	106,830	206,725	5,111	6,009	246	303
Cuba	5,661,979	922,870	6,584,849	2,878,373	71,682	2,950,055	1,590,173	455	1,590,625	4,540,680	106,826	103,822	4,478	3,652
Other Spanish West Indies	620,898	5,716	626,616	174,782	435	175,217	33,604	-	33,604	208,821	14,320	11,134	63	-
Spanish South American colonies	1,106,259	7,858	1,114,117	506,683	1,493	508,176	528,055	1,504	529,559	1,037,735	13,838	13,208	603	282
Portugal	351,701	4,415	356,116	147,726	-	147,726	66	-	66	147,792	19,678	5,106	1,015	-
Madeira	187,701	2,588	190,289	193,414	-	193,414	26,667	-	26,667	220,081	4,140	8,082	148	-
Fayal and the other Azores	137,982	-	137,982	26,837	-	26,837	11,158	-	11,158	37,995	2,287	2,638	-	-
Cape de Verd Islands	63,612	424	64,136	22,176	-	22,176	7,656	-	7,656	29,832	5,038	825	92	-
C. of Brazil and other Portuguese Am. col.	605,126	-	605,126	874,223	11,124	885,348	496,412	-	496,412	1,381,760	10,599	22,264	-	314
Italy and Malta	973,463	-	978,463	410,171	-	410,171	689,496	-	689,496	1,099,667	6,573	8,802	-	-
Triest & other Austrian ports on Adriatic	229,792	-	229,792	31,781	-	31,781	308,580	-	308,580	340,361	2,018	1,895	-	-
Turkey, Levant, Egypt, &c.	389,692	5,988	395,680	30,883	-	30,883	406,997	-	406,997	437,880	1,661	1,393	192	-
China	3,111,950	-	3,111,951	388,535	-	388,535	3,902,025	-	3,902,025	4,290,560	5,622	6,040	-	-
Asia, generally	123,221	-	123,221	32,467	-	32,467	1,180,797	-	1,180,797	1,213,264	1,532	5,423	-	-
West Indies, do.	3,727	-	3,727	512,160	879	518,039	47,474	-	47,474	560,513	216	17,623	-	-
Europe, do.	-	-	-	180,854	-	183,854	10,782	-	10,782	194,636	261	2,294	-	-
Africa, do.	129,943	-	129,943	85,062	-	85,062	41,629	-	41,629	126,691	1,037	2,109	-	-
South Seas	34,428	-	34,428	40,328	-	40,328	29,791	1,289	31,080	71,405	10,643	17,968	-	-
North West Coast of America	-	-	-	94,493	-	94,493	282,505	-	282,505	376,998	-	4,298	-	-
Uncertain ports, places, &c.	-	3,832	3,832	-	-	-	-	-	-	-	-	104	-	-
Total,	$58,025,899	4,559,825	62,585,724	34,465,272	9,206,622	43,671,894	20,710,700	591,788	21,302,488	64,974,382	765,098	804,947	81,526	83,073

TO THE EDITOR OF THE AMERICAN FARMER.

March 9th, 1822.

Dear Sir—Being desirous of determining the exact quantity of food necessary to keep a pig in a constantly thriving state; and the actual expense of feeding him, I selected two that had been weaned three months, and having weighed them, immediately began giving them as much as they would eat, carefully noting the quantity of food consumed, and their monthly gain. They were kept together—and,

Jan. 9, 1819,	The *Barrow* weighed	116 lbs.		The *Sow*	106 lbs.		*Daily food.*
Feb. 9,	ditto	151	Gain 35 lbs.	do.	137	Gain 31.	12 quarts scarcity & 2 qts. meal.
Mar. 9,	ditto	170	19	do.	166	29.	Same food.
Apr. 9,	ditto	202	32	do.	205	39.	Same food.
May 9,	ditto	231	29	do.	231	26.	12 qts. carrots and 2 of meal.
June 9,	ditto	256	25	do.	253	22.	Same food.
July 9,	ditto	274	18	do.	280	27.	12 qts. potatoes and 2 of meal.
Aug. 9,	ditto	291	17	do.	293	13.	12 qts. summer squash & 2 m'l.
Sept. 9,	ditto	307	16	do.	331	38.	8 qts. ditto and 4 of meal.
Oct. 9,	ditto	337	30	do.	361	30.	8 qts. winter squash and 4 do.

The vegetables were boiled and the meal being coarsely ground in a domestic mill, was boiled with them, and as much water added as was necessary to make the mass cool and palatable.

Live weight of the Barrow, October 9th, 1819, at the moment of slaughtering, was 337 lbs.
Dead weight, when neatly dressed, . . 290
Loss, . . 47 lbs.

Live weight of the Sow, ... 361
Dead weight, . . 310
Loss, . . 51 lbs.

Difference between living and dead weight of the two, ninety-eight pounds, or about one seventh. The months of July and August were extremely hot, and I had no cool pen unoccupied, to put these animals in, which I believe was the reason of their gaining so little in weight. The barrow particularly seemed to suffer from the heat, and somewhat to lose his appetite. They were always full fed, and always fat enough for the butcher.

Expense of food, &c.

2 Pigs cost, at 3 months old,	. . . .	$ 8
21 bushels corn,	at 60 cts. . .	12 60
95½ do. vegetables,	25 . . .	23 87
Dolls.		44 47
I sold this pork, 600 lbs.	at 10 cts. . .	60
Difference		15 53

Leaving a profit, when thus highly and expensively fed, of nearly eight dollars per head. I charge nothing for fuel or attendance, as the manure more than pays that expense. At the present price of pork, 7 cents, there would be a small loss, if fed thus extravagantly; which, however, is unnecessary, and only tried as an experiment. The same quantity of pork may be easily raised at two-thirds the expense.

Some time since you desired to be informed of a mode of preserving vegetables during the winter—as I have, in the course of ten or twelve years past, laid up and kept perfectly well, between thirty and forty thousand bushels of carrots, mangel wurtzel, ruta baga, &c. without putting them in cellars; I am able to describe a method which all may practise, under an assurance of perfect safety.

In the autumn, when gathering my vegetables, a trench is dug, about six or eight inches deep, four feet wide, and ten or twelve feet long: into this they are carefully piled about 18 inches high, and then gradually drawn up, so as to form a sloping roof, having the highest point about three feet from the bottom. Upon them a covering of straw about three inches thick, is laid, and as much earth thrown on, as will keep the straw from blowing away. As the season advances we add more earth, so as finally to leave it fourteen or fifteen inches thick. Such a trench will hold one hundred bushels, which is the quantity I always put in, as they can soon be removed into the barn for use, in winter; and, by always having the pits of equal size, I am enabled, from time to time, to ascertain the exact amount of vegetables I have on hand, by merely counting the heaps I yesterday opened one of swedish turnips; they were perfectly dry, as yellow as gold, and not a decayed one in the pit. They keep through April, in this manner. It may be necessary to say, I always chuse a spot, which has a small descent; that the rains may not settle in the bottom of the trench, and that I particularly avoid covering too deep at first. By not attending to the latter directions, I have known large pits of vegetables entirely rotten, within a month of putting them up.

I am now daily using cabbages, for my stock, in fine order, preserved according to Cobbet's plan, by placing the heads downward upon straw, and scattering among the stumps leaves and coarse meadow hay. This is the easiest and best mode I have ever known of keeping them for winter or spring use.

With great respect, and every good wish for the continuance and success of your labors as editor of a useful and interesting Journal,

I am, dear sir,
Your obedient servant,
A MASSACHUSETTS FARMER.

P. S. I ought to have stated that when putting up ruta baga, the root with the earth adhering to them ought to be carefully trimmed off, otherwise so much dirt will cause a fermentation and growth in the heap, and be likely to spoil a great part of the vegetables.

* * *

FOR THE AMERICAN FARMER.

Remarks on the great importance of DEEP TILTH; and our want of a suitable instrument to accomplish it without burying the SOIL.

SANDY SPRING, Md. 3d Mo. 13th, 1822.

When an individual in a community conceives an idea or possesses a knowledge of any operation which he thinks would be an improvement of general practice, and its use a public benefit, to communicate it, if not a duty, is at least not censurable. The idea which I am about to offer for the consideration of my fellow citizens, and which I believe will be found to be an improvement, originated in the minds of several of my neighbors as well as in my own, as far as I know, independently of each other. I know not with whom it had priority. The subject is an agricultural instrument to stir and loosen the ground, *deeper than the deepest ploughing*, so as to keep the vegetable mould still above.

The idea of such an operation has been for years in my mind, but dormant there, in consequence of pursuits which gave me full employment and restrained me from the immediate practice of agriculture, until the end of the 6th month of last year, when I wrote to Gideon Davis, of Georgetown, a letter of which the following is an extract:—"I think there is still wanting in *good husbandry*, an instrument such as I have not yet seen in use. My idea is as follows:—in breaking up ground which has been long neglected, I would have an instrument somewhat like a coulter, to follow the first plough, and to stir the ground in the bottom of the same furrow (without bringing it up) six or eight inches deeper, the next furrow of the breaking-up plough to be turned over on this loosened earth, and the coulter again to follow and so on through the field. I would have the first plough to make *a deep furrow*, notwithstanding I would *stir the ground* still deeper. I am bent on making this experiment, at least—and I wish thou wouldst turn thy thoughts toward such a culture and such an instrument."

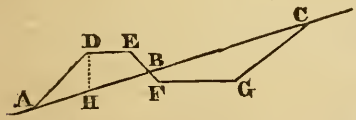
My friend and neighbor, Roger Brooke, has just put into my hands, with permission to use at my discretion, the following copy of a paper which he drew up sometime last autumn, and sent, addressed to the editor of the American Farmer, to be published *anonymously*. It must have miscarried, as it has not appeared in print. I have prevailed on him to allow me to connect with it the *real name* of the author.

"Our agricultural implements generally, and "ploughs particularly, have lately been much "improved, and deep ploughing has been adopted by almost all good farmers. We however, "lack one implement from the operation of which "it is believed we should derive many important "advantages. I mean a proper instrument to follow the plough in all its rounds, and to open the "bottom of the furrow, so that we may stir the "earth and render it pervious to a greater depth "than can be done by the plough alone, and yet "leave the vegetable mould near the surface "where nature has placed it, and where it ought "to be for obvious reasons. The utility of such "an operation will be readily seen by all who "know the great length of roots which are thrown "out by most vegetables, wherever they find "sufficient depth of loose earth. I have for "years had thoughts of putting in practice something of the kind, but not knowing exactly what "would best perform the desired operation, added to a disposition too apt to delay the performance of what I know to be right—I have "neglected it: Although it may appear at first "view to be no difficult thing to construct something adapted to the purpose, yet I think it of "consequence enough to claim the attention of the "Maryland Agricultural Society, and worthy of a "handsome premium, for the one that will, with "a given power, break the whole width of the "furrow to the greatest depth. Should it not be "deemed worthy of consideration to the society, I "hope some of our ingenious and public spirited "mechanics will exert their inventive powers, to "confer a benefit on the cultivators of the soil. I "have thought of three coulters, or the same "number of the tines of Beatson's scarifier placed "in a triangular position, but this I leave to better judges, not doubting that if others attach the "same importance to the operation that I do, "something suitable to perform it, will be invented." A.

A neighbor of ours, a good practical farmer, Joseph Delapiane, has, since last fall, made trial of a machine of three coulters, to loosen the ground in the bottom of the furrow, and, I believe, thinks well of the operation. Roger Brooke is *now* using a machine consisting of two coulters, and in a few days I expect to have a similar one. We propose to communicate, hereafter, the results.

The benefit we may reasonably expect from a more extensive range for the roots of the plants we cultivate, is considerable, yet it is not the only one. A much greater quantity of water will be imbibed and *retained* to mitigate the severe effects of a following dry season, and the most fertile part of the soil (that on the surface) will remain in its proper place instead of being carried away by what is called *washing*, which is more exhausting to the soil than any crop whatever can be, and for which there is no preventive so effectual as loosening the earth to a sufficient depth. This will be quite obvious if we consider the mode of cultivation, too common, which leaves a super stratum from three to six inches deep of loose soil, lying on a compact, impervious bed of clay—a quantity of rain often falls sufficient to render this soil nearly fluid, the water cannot suddenly penetrate into the solid pan below, but carries off the best of the surface. If the earth were loosened to the depth of about fifteen inches, few rains would be so copious as not to be imbibed and lie quietly as in a sponge.

In concluding this little sketch on *deep stirring*, I will state a *fact* which came under my observation last summer—it was calculated to speak to an attentive mind an impressive language, more powerful than volumes of *mere* theory. In the spring of last year, near James River, a canal was made, passing through a piece of ground which had been formerly in cultivation; but, for some years past, had remained in the state, in which it was when the canal was commenced, *turned out*, *neglected* and *unproductive*. The direction of the canal is east and west, along a hill side facing the south. The following diagram will show a cross-section, giving a view of the declivity of the ground, and the dimensions and position of the bank:



The line ABC represents the natural surface of the ground in a direction across the canal; the line DE, the towing path 10 feet wide; the line FG, the bottom of the canal 28 feet wide. The figure BFGC represents a section of the excavation; and ADEB, a section of the bank. DH, the depth of the made bank is five or six feet. Although this canal was made in the spring, it remained clear of water until autumn. During the spring abundance of rain fell, but the summer was remarkably dry. Now the precious *fact*, to which I have alluded, is, the little vegetation that had appeared on the unbroken surface above C and below A was nearly destroyed by the extremely dry season—the slope GC was entirely destitute of vegetation, during the whole summer—yet the slope AD, having the same south exposure, and the top of the bank, were s with a luxuriant growth of large and vigorous plants, such as are commonly seen in the richest soils—Stramonium or Jamestown-weed, Poke, Lambsquarter, &c. these flourished during the whole of the dry season, and did not seem to be even diminished in vigor. If a tool were stricken into any part of the slope GC, it would bring away either *dust*, or a clod nearly as hard as a sun-dried brick; the earth in the made bank remained always friable, and some *moisture* was always visible a small distance beneath the surface. The earth of which this bank was composed, was not productive until loosened to a considerable depth.

No doubt the intelligent readers of the American Farmer have often observed similar *facts*—the inferences, I think, are obvious.

ISAAC BRIGGS.

From the N. Y. Statesman.

Woollen Manufacture.

My last paper contained a criticism on an opinion given by Dr. Cooper on the woad vat. It is my intention to point out other errors in his work on dying, not with a view of injuring that work in public estimation, for I consider it the best of its kind; but to show those who may consult it for practical purposes, that it contains many receipts and opinions very injurious to their interest, and to the rising manufactories of the country. I purchased the work in the year 1817, and made marginal notes during the first day's perusal, of thirty-two practical and scientific errors.

Dying is an art purely chemical, in which the play of affinities are often very complicated. If chemists would become dyers, or dyers chemists a great deal of light might be thrown on this mysterious business; but in the arts, the general reasoner is a novice, and it is the experienced practitioner alone who can be expected to explain the principles of his art. Bancroft made a number of experiments on minuter quantities, and drew general conclusions from them; but when he made a trial on a large scale at Goodwin's dye-house, he found that his favorite hypothesis was altogether erroneous.

Many of the receipts collected by Dr. Cooper, are from old French authors, now become obsolete, and are much too complicated and expensive, for the trade of the present day. There is also a fashion in the hue of standing colors, which those receipts will not resemble. The most prominent errors, as might be expected, are those which the doctor has marked as his own.

Having made these general remarks, I shall proceed to collect extracts, and show wherein they are erroneous. It will be understood that my observations refer only to the coloring of woollen.

P. 30. "The brightness of the color is also improved by sulphuring."

P. 32. "If the wool be intended for any fine and bright colors, it will be better for being either sulphured, or exposed for a day to the action of the sulphureous acid."

Woollen cloth that has been sulphured, which is seldom done, excepting for uniform white, will never take any other color well afterwards; nor will a dyer who understands his business, undertake to color such goods at his own risk.

P. 60. "The more perfectly the indigo is deoxyded the better; this is known by the uniform green color of the liquor in the blue vat."

When indigo is perfectly de-oxydized, it will become white, and no art can make it re-absorb oxygen; consequently, no color can be obtained from it. The liquor of a blue vat when examined by a workman, is usually thrown out of some small vessel, which is elevated above the vat; and the color, when viewed by transmitted light, should be of a fine olive green, and highly vivid. Now, so far from this being a state of perfect deoxydizement, it is removed many shades from even the minimum of oxydation.

P. 5. "The common mordants or saline substances in the preparation liquor, for woollens, when a very full color is intended, is four ounces of alum and two of tartar to each pound weight of woollen. The alum should be first dissolved, then the tartar by small quantities at a time; for an effervescence takes place, which may throw the liquor out of the boiler."

This proportion of mordant is too large for wool dying, one-fifth, or one-sixth of alum is sufficient, and the tartar, should never exceed the ratio of one-third of the alum. An effervescence cannot be produced unless the water contain some carbonate, which is generally carbonate of lime.

P. 6. "If the water meant to be employed, be foul or hard, and not fit for washing, or curdles soap, it is not fit for dying bright colors. This defect may be remedied by boiling bran, &c. in it; but no bright color can be obtained from foul or hard water.'

It is a fact well known by the best English dyers, that water holding the carbonate of lime in solution, which is not fit for washing, and will curdle soap, is the best for dying bright colors, such as scarlet, buff, orange, &c. &c. Foul water is never used for bright colors, nor can it be remedied by using any glutinous substance.

The property of water has more to do with dying, than is generally imagined. This subject would afford an extensive essay; but my observations must necessarily be confined to a statement of a few facts, which I hope will throw some light on the subject.

The dyers in the county of Gloucester, are more celebrated for coloring scarlet and black than those of any other county in England.—Some particular places in France are also celebrated for the same colors. The water in the county of Gloucester is highly impregnated with carbonate of lime; so much so, that twigs laid in the streams will soon become thickly encrusted with it; and a violent effervescence is produced, when a mordant containing an excess of acid is thrown into the boiling dye liquors. In all accounts I have read from French authors on dying a similar effervescence takes place, where they are celebrated for the same colors. I have ascertained from my own experience, that no two streams situated at any considerable distance from each other will produce the same shade of color, from a like proportion of the same materials.—There is also a sensible difference, in the effect produced by water from the same stream, when used at places distant from each other.

There is a locality in the practice of dying, arising from the variable properties of water, which accounts for the various receipts given by different writers, to produce the same color. I knew a dyer who commenced business in one county and failed; he then removed to an adjoining county, and became highly celebrated. After maintaining his reputation undiminished for thirty years, he returned to the county he had originally left, where he again lost his credit—nor could he there maintain the reputation of a common dyer.

When water is more or less impregnated with limestone, the effects produced by the mordants on coloring matter will be very different, than in water containing none, which will be evident from the most cursory view of the subject. When any mordant containing an excess of acid, as super-tartrate of pot-ash, is thrown into water holding common limestone in solution, the excess of acid will combine with the lime, and a new mordant will be formed; (tartrate of lime;) but this is not the extent of the effect produced—that portion of the lime, which remains after the excess of acid has been neutralized, will decompose a portion of the tartrate of pot-ash, and the mordants remaining in the liquor, will be tartrate of lime, tartrate of pot-ash and pot-ash. If the sulphate of iron be the mordant used, the result will be sulphate of lime and an oxyde of iron, and changes will be produced more or less on every mordant used. When pure water is employed, none of these changes can take place. With a knowledge of these facts, and also, that different waters contain different alkaline earths and oxydes in solution, in innumerable proportions, we shall no longer be surprised at the variety of receipts given by different artists to produce the same color.

P. 8. " In extracting the colors of many coloring drugs, as yellow and red, it seems to me, that a full boiling heat ought to be avoided.—Hence I should approve of the method employed in the English dyehouses, on the recommendation of Count Rumford, of boiling by steam."

The heat of steam is used by very few of the English dyers, and where used, is done from a principle of economy, not from an idea of dying below a boiling heat. Madder reds are never boiled, because the yellow of the madder, which can be imbibed only at a boiling heat, injures the color. There are but few colors that the pores of wollen will absorb below a boiling heat ; and yellows require a strong boiling.—Steam heat will answer in some colors, but in the greater number it will not, for scarlet and many others that have been tried by steam were found to have only an external coloring. Hence the reason why those who use steam, have a grate under each furnace, to be made use of when necessary.

P. 16. " Nicaragua, Peach, Cam, and Bar woods. These are now imported, and used as very inferior and cheap substitutes for Brazille and Crazitutto. It would be well worth while to make a set of comparative experiments, as to the quality and brightness of coloring matter they contain, for the purpose of ascertaining their relative value. The nitro-muriat of tin should be the precipitant for these woods."

Cam and Bar woods, produce colors of a very different kind, from Brazille wood, and are much more permanent, therefore, their relative value cannot be expressed, by any comparison of the proportion of their precipitates. Neither can an abundant precipitate be always considered as a proof of superiority, for it is often only apparent, and is owing to a feculent matter, which adheres to the acid, and is carried down with the precipitate.

P. 17. " Stick lac : seed lac : shell lac. The red colouring matter of the resin lacca, is very frequently used as a dying material on the continent of Europe ; but in England, I believe lac is only used for sealing-wax, and black paper varnish."

The coloring matter of shell-lac, has been used in England about fourteen years, as a substitute for cochineal. It is extracted in the East Indies, and precipitated with muriate of tin ; from whence it is imported in square cakes, and the best quality has been sold at about half the price of cochineal.

I discovered the process, by which scarlet could be coloured from lac lake, in the year 1807 ; and entered a caveat with intention to secure a patent right. But on leaving the country the following year, I gave up all idea of reaping any advantage from the discovery. The following is the process, now followed, to color scarlet with the lac-dye, which I have lately obtained from England.

First. A lac spirit must be prepared, by dissolving four ounces of tin in each pint of muriatic acid ; which must be done by digesting the mixture in a sand heat. This is called the lac spirit. When the tin is dissolved, the following compost must be prepared in a sand heat also ; take ten pounds of the lac spirit, in which dissolve six pounds eight ounces of lac-dye, six pounds eight ounces of cream of tartar, four ounces of tumeric, eight ounces of cochineal, and one pound of safflower ; when these ingredients are well stirred in, add to the mixture four ounces of diluted sulphuric acid. It must now be well stirred for one hour, and let it remain in the sand heat, until the following morning. To dye a scarlet, one pound of the compost is used to two pounds of woollen.

HOPSON.

* * *

ON THE ROT IN THE GREEN SEED COTTON.

Charleston, S. C. Feb. 8th, 1822.

DEAR SIR,

Should you deem the following observations on the *rot in green seed or upland cotton*, worthy of a place in your truly useful paper, I beg you will give them an insertion, and oblige one of your subscribers from South Carolina.

In the year 1818, my cotton was first visited by this dreadful malady, the rot, and suffered considerably. From frequent conversations with several intelligent and observant planters, I became convinced, that the injury was caused by an insect's puncturing the pod, and most probably for the purpose of depositing its egg, which might be protected through the winter, by the woolly fibres which adhere to the seed. In 1819, I tried the following experiment, particularly on a small field of rich land contiguous to my dwelling house. Early in the winter I had the stalks collected and burnt ; and finding that many pods, destroyed by rot, had fallen off and were lying about the field, I had them carefully raked up and burnt. A few days before sowing, I had several casks got, in each of which were put about one bushel of ashes to about twenty gallons of water, taken from a manure heap, and a gallon or two of pickle, which had been used for curing meat during the winter. The mixture being well stirred, was allowed to stand for 24 hours—the seed was then put in carefully, a small quantity at a time, and stirred, so as to separate them. They were allowed to steep about 20 hours, and then rolled in ashes, mixed with a small quantity of lime, until each seed was completely covered. On the 25th of March, the field was planted (immediately after the seed was rolled) and, although the season was cold, came up well. Towards autumn I perceived a little rot among it. The produce, when gathered in, was kept separate from all other cotton, and yielded 285 lbs. of clean good cotton per acre. I mention this, to shew that the effect of rot must have been inconsiderable. My other fields were treated in a similar manner, with the exception of raking up the fallen pod, which was found tedious. These, likewise, suffered rot very materially. The next year, being absent from home at planting time, I directed the same process to be followed ; but am inclined to think, it was not done with the same attention. I had more rot this year, but very far less than my neighbors. I have, however, abandoned the culture of the green for that of the black seed cotton, (from its dreadful effects in the lower country) which is free from this evil ; and, although I have observed the small dark speck (which is the incipient stage of rot with green seed) upon the pods, it appears to have done no harm, from the pod being probably of a firmer and more impenetrable texture.

I am of opinion, that if this plan was tried throughout a neighborhood generally, the disastrous effects of rot might be much diminished, if not altogether prevented ; but it may not have the desired effect in solitary instances, as the insects may transport themselves from fields infected, to those where the precaution may have been used. Nor can I affirm, that very strong ley may not injure the germinating of the seed ; but, with such as I have tried, I know that it will not; as I have had seed to remain in the ground for several weeks from drought, and then come up well. This, however, can be tried on a small scale, by placing the seed so prepared, in a warm place, before the sowing of the crop generally. The cultivating of green seed cotton being altogether given up, in the part of the country in which I reside, I shall renew my experiment this year—and, should it be attended with the success anticipated, will feel much happiness in communicating it.

* * *

From the Archieves of Useful Knowledge.

To Make Soft Soap.

Take five bushels of ashes, damp them thoroughly on the ground, and let them stand from five hours to two days, as may be convenient ; then make up the heap in an oblong form, open the middle, and put in three pecks of perfectly fresh lime, and sprinkle about three or four quarts of water over it, and cover up : observe to use hot water in very cold weather. In large experiments, cold water will answer in any weather.

In half an hour, the lime will heat, and burst open the heap of ashes, when the whole must be well and quickly mixed, and put into the ley tub, to the depth of one foot, and beaten moderately ; another layer of ashes, of the same depth as the first, is then to be added and beaten as before, and so on until the tub it filled within six inches of the top ; water is then to be poured in steadily until the ashes are nearly or entirely spent. The ley must be of a strength scarcely sufficient to float a newly laid egg : four gallons of this ley are to be put into a large kettle, and thirty or forty pounds of fat added, and well stirred, over a gentle heat. When it is perceived, that the sharp taste of the mixture is lost, more ley is to be added occasionally, until the soap becomes transparent and very thick, and toward the last of the operation the liquid must be made to boil briskly. When the soap is made, let it stand for a day ; when, if it does not grow thin, in that time, no apprehensions need be excited as to the occurrence of that circumstance. The kettle should be covered, and should hold more liquid than it is intended to boil, to give room for a brisk ebullition towards the close.

For HARD SOAP, mild ley is to be used.—When the soft soap is finished, and the mixture still tolerably hot, add sea salt until the ley drops clear from the soap : if it closes, add more salt, and at the same time, slacken the fire ; then boil until the froth becomes as light as a feather.—Draw the fire, and pour in salt and water into the mixture to cool it, observing to make a rapid stream, and not to let any drops fall in turning up the bucket. When the soap is too strong of the alkali, it will not grain ; in that case, add clean fat by degress, until it granulates, stirring it all the time over a gentle heat. When it boils, no more fat need be added.

It is to be observed, that if the ashes have been too tightly pressed in the ley tub, the ley will not filtrate ; and if they have not been sufficiently pressed, the water will run foul. In the first case, the ashes may be loosened with a long iron scewer ; in the latter, they must remain some hours to settle, and also be pressed.

Observation.—The foregoing receipts were some years since given to the Editor, by one of the best manufacturers of soap in Philadelphia, and he had it tried under his direction, with success. He has even recently recovered a large quantity of half made soap, by knowing the proportions of the several ingredients employed, and by supplying the deficient ones agreeably to the receipt; after the female farm servant declared that the mass was worth nothing. Rather less fresh lime was used than is directed.

REMARKS

On Hydrophobia, more particularly as it occurs in Dogs; in a letter from a gentleman of observation and experience in New-Jersey, dated March 15, 1822.

Sir—I lately read with much pleasure, in the New York Spectator of the 1st instant, Mr. Middleton's letter to you, accompanying Dr. Marochetti's very interesting report on the symptoms and cures of hydrophobia.

As I consider it the duty of every member of the human race, to communicate any thing that may in any way tend to elucidate or corroborate this wonderful discovery, (the greatest that has yet been made in medical science,) I beg leave to submit to your consideration two cases which within these eighteen months have fallen within my personal knowledge and information, that may be depended on.

On the morning of the 18th of December, 1820, while living in Canada, a favorite dog belonging to me of the Setter breed, showed what I imagined to be symptoms of madness, on which I immediately directed my servant to tie him up in an outhouse, and to give him some salt and water, as he appeared from *scratching his neck and throat until it absolutely bled*, to have something sticking in it; this made him in a short time throw up a quantity of yellow frothy matter, and seemed to relieve him very much, so that at 12 o'clock he appeared free from every species of complaint.—Soon after; the servant gave him some water which he lapped freely and immediately threw up a large quantity of the same yellow frothy matter, some of it in large lumps. From these symptoms I was induced to think he had swallowed some poisonous substance, on which account I gave him some milk and water and fat mutton broth, which he took freely and appeared as if sensible of the attention paid him, and as usual wagged his tail and readily obeyed every order I gave him.

Next day his appearance was more unfavourable, his eyes appeared glazed and heavy, his tail drooped, his stomach and bowels were contracted his back raised in a circular form, and *his neck raw from continual scratching*. At this time I had him and the barrow in which he lay removed to a warmer place, which I did without any difficulty, as he knew and obeyed me as usual: yet soon after, when I held out my stick towards him, he laid hold and left the marks of his teeth in it. In the evening I gave him some more milk and water and mutton broth, which he took freely and went to rest.

About midnight I was awakened by his incessant and apparently painful barking, which he continued without intermission until day light, when he exhibited what appeared to me such undoubted signs of violent madness, that I was under the painful necessity of shooting him. My servant then told me that the day I desired him to be tied up, he made a snap at his thigh, and gave it a pinch, but having on thick pantaloons and drawers he did not break the skin, and no bad consequences have issued from it.

When staying last August, with my friend, Mr. Grant, at Montreal, I happened to mention all these circumstances to him, when he, pointing to a favorite dog, lying at his feet, told me, that about two years ago he was in so similar a situation, that he left orders with his servant to shoot him, and as he could not do it himself or be in the way when it was done, he went into the country for some hours. On his return home, the first question he asked was "have you disposed of the dog?" to which to his *great surprise* the servant answered "No sir, I could not find in my heart to kill the poor dumb brute, and as he seemed by his *violent scratching* to have something in his throat or mouth, that caused his illness, I got a friend to assist me, who held him down while I opened his mouth for the purpose of examining it and his throat, when *under his tongue*, I observed a large *Blob or Tumour*, which I opened with a penknife, and out of it came a great deal of nasty matter, which the dog threw out of his mouth, immediately leapt up, frisked about the room as if sensible of the cure that had beer effected on him, and he is now as well as ever he was." Mr. Grant could hardly believe the story; but the entrance of the dog into the room *in his usual manner*, to his great joy, confirmed the truth of it.

On Mr. G.'s relating these circumstances to me, I mentioned to him that I thought the matter of so great consequence, that he ought to draw up a statement, and communicate it to some medical friend, as it might, perhaps, be the means of finding out a cure for the distemper in dogs, which I *then* thought it was, though was convinced, from Dr. M.'s report, that it was the real hydrophobia.

As I soon after left that country, I do not know whether or not Mr. G. followed my advice; but in case he has not, I now give you all the circumstances of both cases, well convinced that they cannot be placed *in better hands*; leaving you at liberty to make such use as you may think proper, of this information.

As Dr. M. mentions having the hands *properly* covered when examining the mouths of patients, I would beg leave to suggest your publishing what material you deem a proper and necessary covering for the hand; with which, and a lancet, at least one person in each village or large family ought, *in case of accidents* to be provided, as there are many parts of this extensive country where medical aid cannot be procured, or the patient unable to pay the expense of the long attendance necessary. And I would also beg leave to suggest the propriety of having this report of Dr. M.'s promulgated throughout the country in general, through the medium of Newspapers or cheap pamphlets, with the addition of such remarks as you may think proper or necessary to make to it.

When I was a boy at school, in the North of England, I learnt to *worm* dogs, which *it was said* did not prevent their going mad; but in case they were infected, occasioned a relaxation or paralysis in the lower jaw, which disabled them from biting any thing, and under that idea, I afterwards wormed a number of dogs, but cannot, at this distant period, say what were the consequences or effects of it; but as the custom was general, there must have been something in it, and perhaps might have proceeded from the idea that the tongue was *somehow afflicted*. That the saliva of a mad dog will not communicate the disease unless carried into the circulation through a wound in the skin, I am perfectly convinced, as a lady a friend of mine, had her face licked all over by a favourite greyhound, which had been tied up on account of being supposed to be infected, but got loose, and immediately after being again tied up got loose a second time and ran off, and before he was killed bit a number of dogs and cattle, *all* of which went mad, yet the lady never felt any bad consequences from it.

With real esteem,
I have the honor to be,
Sir, your most obedient,
Humble Servant,
W. A********.

Dr. Mitchell, M. D.

ON BATHING.

From Willich's Domestic Encyclopedia, edited by Professor Cooper, and for sale by Abraham Small, Bookseller, Philadelphia.

Bath, in the general acceptation of the term, signifies a convenient receptacle of water adapted to the various purposes of washing or cleansing, and bracing the body, either by plunging, or continuing in it for a certain time.

Baths may be divided into *cold*, *cool*, *warm*, and *hot*: and these again into natural and artificial.

In order to treat this interesting subject systematically, we shall consider it according to the division above-mentioned.

Cold Baths are those of a temperature varying from the 33d to the 56th degree of Fahrenheit's thermometer. The general properties of the cold bath consist in its power of contracting the animal fibres, while it dissipates the *caloric* (or matter of heat) that exists between their interstices, and thus effects a greater approximation of the particles, which were before dilated and relaxed by heat. That such is the natural influence of cold, cannot be doubted; and hence this species of bath, by its powerful action on the whole system, is one of the most important medicinal remedies presented by the hand, and, as it were, supplied by the very bosom of nature.

Even in the most remote times, cold bathing was resorted to, with obvious advantage, by nervous and debilitated persons; but in the dark or middle ages, this genuine source of health was totally neglected, till the good sense of Europeans again adopted it as a general restorative, when the prevailing diseases of relaxation and atony rendered the use of such a remedy inestimable.

The superior advantages of cold bathing over all internal *corroborants*, consists chiefly in its immediate salutary action on the solids, without the intervention of the organs of digestion and nutrition; without having to perform a passage through numerous channels, before it can exert its efficacy. For this obvious reason, it is peculiarly adapted to those constitutions which, though robust, and apparently healthy, are liable to nervous, hysteric, hypochondrial, and paralytic affections, as well as to frequent attacks of flatulency and consequent indigestion.

Without expatiating, either on the history, or the sensible effects of the *Cold Bath*, we shall proceed:

I. To a general enumeration of those cases, in which it cannot be resorted to with advantage and safety.

II. To lay down the necessary rules and directions for the use of this *heroic* remedy.

With respect to the former, we must be concise, and shall chiefly point out by *negative* propositions, those particular states of the body, in which *cold* bathing must not be attempted: namely, 1. In a full habit of body, or what is called general *plethora*, on account of the frequent febrile disposition attending such individuals; 2. In hemorrhages or fluxes of blood, open wounds or ulcers, and every kind of inflammation, whether external or internal; 3. In obstructions of the intestines, or habitual costiveness; 4. In affections of the breast and lungs, such as difficult respiration, short and dry coughs, &c. 5. When the whole mass of the fluids appears to be vitiated, or tainted with a peculiar acrimony, which cannot be easily defined, but is obvious from a sallow colour of the face, slow healing of the flesh when cut or bruised, and from a scorbutic tendency of the whole body; 6. In gouty and rheumatic paroxysms; though Sir John Floyer asserts, that "*Podagries* sometimes have kept their fits off with it;" 7. In cutaneous eruptions, which tend to promote a critical discharge of humours by the pores (yet the celebrated physician just mentioned, informs us, that great cures have been effected in the *leprosy*, by bathing in what he calls, "Cold Sulphur Water") 8. During pregnancy; and 9. In a distorted or deformed state of the body, except in particular cases to be ascertained by professional men. Sir JOHN farther recommends, but too indiscriminately, the dipping of ricketty children one year old, every morning in cold water; and he is of opinion that, in adults, it prevents the infection of fevers, by making the body less sensible of the changes of air; that, in old women, it stops violent hemorrhages from the uterus; that it has contributed to cure canine madness, poisonous bites of animals, and obstinate agues, by going in previously to the return of the fit, and after all the evacutions of the body have been properly attended to; and, lastly, that the *Sea-water Bath* has been of eminent service in dropsies, and defective hearing: in which last case he knew a deaf person who could hear perfectly well, on the day he bathed in the sea.

Experience, however, has but too often evinced, that this excellent remedy, whether by fresh or salt water, cannot be implicitly relied upon in those complaints; nor will it be productive of any good effects, unless our conduct, in general, be accommodated to the following rules:

1. It is a vulgar error, that it is safer to enter the water when the body is *cool*, and that persons heated by exercise, and beginning to perspire, should wait till they are perfectly cooled. Thus, by plunging into it, in this state, an alarming and dangerous chillness frequently seizes them, and the injury sustained is generally ascribed to their going into it too warm; while it doubtless arises from the contrary practice. Dr. J. CURRIE, of Liverpool, in his valuable "*Treatise on the Effects of Water in Fevers*," says, with equal truth and precision, that "in the earliest stages of exercise, before profuse perspiration has dissipated the heat, and fatigue debilitated the living power, nothing is more safe, according to my experience, than the cold bath. This is so true, that I have for some years, constantly directed infirm persons to use such a degree of exercise, before immersion, as may produce some increased action of the vascular system, with some increase of heat, and thus secure a force of re-action under the shock, which otherwise might not always take place. But, though it be perfectly safe to go into the cold bath in the earlier stages of exercise, nothing is more dangerous than this practice, after exercise has produced perspiration, or terminated in langour and fatigue; because in such circumstances the heat is not only sinking rapidly, but the system parts more easily with the portion that remains." In short, it is a rule liable to no exception, that *moderate* exercise ought always to precede cold bathing, to promote the re-action of all the vessels and muscles, on entering the water; for neither previous rest, nor exercise to a violent degree, are proper on this occasion.

2. The duration of every cold bathing applied to the whole body, ought to be short, and must be determined by the bodily constitution, and the sensations of the individual; for healthy persons may continue in it much longer than valetudinarians; and both will be influenced by the temperature of the air, so that in summer they can enjoy it for an hour, when, in spring or autumn, one or two minutes may be sufficient. Under similar circumstances, cold water acts on aged and lean persons with more violence than on the young and corpulent; hence the former, even in the hottest days of summer, can seldom with safety remain in the bath longer than a quarter of an hour, while the latter are generally able to sustain its impression for double that time.

3. The head should first come in contact with the water, either by immersion, pouring water upon it or covering it for a minute with a wet cloth, and then diving head-foremost into the water.

4. As the immersion will be less felt when it is effected suddenly; and as it is of consequence that the first impression should be uniform over the body, we must not enter the bath slowly or timorously, but with a degree of boldness. A contrary method would be dangerous; as it might propel the blood from the lower to the upper parts of the body, and thus occasion a fit of apoplexy. For these reasons, the *shower bath* is attended with considerable advantages, because it transmits the water quickly over the whole body; and, consequently, is more consistent with the rules before-mentioned.

5. The morning is the most proper time for using the cold bath, unless it be in a river; in which case, the afternoon, or from one to two hours before sun-set, will be more elligible; as the water has then acquired additional warmth from the rays of the sun, and the immersion will not interfere with digestion: on the whole, *one* hour after a light breakfast, or *two* hours before, or *four* hours after dinner, are the best periods of the day, for this purpose.

6. While the bather is in the water, he should not remain inactive, but apply brisk general friction, and move his arms and legs, to promote the circulation of the fluids from the heart to the extremities. It would, therefore, be extremely imprudent to continue in the water till a second chillness attacks the body; a circumstance which would not only defeat the whole purpose intended, but might at the same time be productive of the most injurious effects.

Immediately after the person leaves the bath, it will be necessary for him, with the assistance of another person for despatch, to wipe and dry his body with a coarse and clean cloth. He should not afterwards sit inactive, or enter a carriage, unless warmly clothed and wearing flannel next the skin: if season and circumstances permit, it will be more proper and highly beneficial, to take gentle exercise till the equilibrium of the circulation be restored, and the vessels as well as the muscles, have acquired a due degree of re-action.

The best place for cold bathing is in the invigorating water of the sea, or a clear river; and where neither of these can be conveniently resorted to, we recommend the SHOWER BATH; an apparatus which may be procured from the tinman. Its effects are doubtless more powerful than those of the common bath: and though the latter covers the surface of the body more uniformly, yet this circumstance by no means detracts from the excellence of the former: because those intermediate parts, which the water has not touched, receive an electric and sympathetic impression, in a degree similar to those brought into actual contact. As every drop of water from the shower bath operates as a partial cold bath, its vivifying shock to robust individuals, is more extensive and beneficial, than from any other method of bathing.

Hence this bath is possessed of the following important advantages; 1. The sudden contact of the water may be repeated, prolonged, and modified, at pleasure; 2. The head and breast are tolerably secure, as it descends towards the lower extremities: thus, the circulation is not impeded, breathing is less affected, and a determination of blood to the head and breast is effectually obviated; 3. As the water descends in single drops, it is more stimulating and pleasant, than the usual immersion; and can be more readily procured and adapted to circumstances; lastly, 4. The degree of pressure from the weight of water, is here likewise in a great measure prevented; nor is the circulation of the fluids interrupted so as to render the use of this bath in any degree dangerous; a circumstance of the highest importance; because by the ordinary immersion, persons are often exposed to injuries which they least apprehended.

Cold bathing produces the best effects when used early in the morning; and when, after wiping the body dry, moderate exercise is afterwards taken. The evening is certainly not the best time to use the cold bath in the city; several cases having occurred within the Editor's observation, of violent fevers in persons who tried this experiment in the months of August and September. Bathing in salt water every morning is said to preserve strangers from the dangerous seasoning fevers of the West Indies; but in this case temperance must also be joined, and is probably more certain in its effects than any other remedy. The cold bath is highly useful to preserve children from the bowel complaints which prevail in the summer throughout the United States.

THE FARMER.

BALTIMORE, FRIDAY, APRIL 5, 1822.

☞ The comforts, and the profits of rural life, are made up in a great measure, by attention to *small matters*. Though every one might—how few do, enjoy in their families the sweets collected by the industrious Bee. How little is known by the mass of society, of the natural history or economy of this interesting insect. We shall publish several papers on the management of it, and have begun with a small English treatise of modern date. It is calculated in England that almost every Cottager might keep from four to six hives, and that each one ought to yield him 25 shillings, exclusive of the swarm, so that every one might pay the rent of his cottage from the produce of his hives alone; certainly nothing yields a greater profit, compared with the disbursement than the keeping of bees.

Our files contain other works and communications on the same subject, which will be noticed or inserted as opportunities offer.

☞ We have just received from London, a copy of a small work, The American Gardener, from the pen of the celebrated William Cobbett. Our readers will find it very curious and useful, and as soon as we can get the engravings executed, we shall commence the publication of the work entire in this paper.

☞ We return our sincere thanks to those of our patrons who have already so promptly and honorably complied with the terms of subscription.

☞ The long continued and severe illness of Mr. Redding, who attends to the details of this paper, will account for the non-appearance of the Index to the third volume, as well as for other omissions and irregularities. He is again at his desk, to the great relief of the Editor, and the Index may be expected within the next two weeks.

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PRICES OF COUNTRY PRODUCE.

Corn, 72 to 74 cts.—Whiskey, 31—Wool, 30 to 50—Wheat, red, 132 to 135—do. white, 135 to 140—Maryland Tobacco—fine yellow, none—good yellow $16 to 18—Fine red, 8 to 12—good do. 6 to 8—Common, 5 to 7—Eastern Shore, 3 to 5—second do. 1 to 4—all other articles remain as at last week's quotations.

AGRICULTURE.

The Cottager's Manual,

FOR THE MANAGEMENT OF BEES THROUGHOUT EVERY MONTH OF THE YEAR.

To the president, vice presidents, the treasurer, and members of the British Apiarian Society, who, by their laudable endeavors, have encouraged the culture of the Bee, amongst the cottagers, this manual is dedicated, with feelings of the most profound respect, by their secretary.

[CONTINUED.]

APRIL.

The active department of the apiary increases this month, in warm and favourable situations the population of the hive will have increased considerably, and towards the latter end of the month, some drones may perhaps have made their appearance. This ought to be the subject of congratulation to every bee-master,* and I would wish to impress this maxim upon his mind, *early drones, early swarms;* for immediately that a drone is perceived, the most positive conclusions may be drawn, that the time is not far distant, when the proprietor will be gratified with the sight of a swarm.

The provident apiarian will this month provide himself with the number of hives requisite for the reception of his swarms. This is a point of prudence on the part of every apiarian, for it is certain that many swarms are lost from a want of attention, in being seasonably provided with hives—never put a swarm into an old hive, indeed some cottagers pay so little attention to this advice, or consider it of so little consequence, that it appears perfectly immaterial to them in what sort of a hive they put the swarms, so that it be a hive; it seems to be of no moment whatever, whether, the hive stored in some outhouse or cellar, has been the receptacle, during the winter, of all sorts of vermin obnoxious to the Bees, or whether the eggs of the moth have been deposited in it, to be hatched with the return of spring, and in a short time to prove the destruction of the combs. I would advise the cottager to follow the example of the antiquated lady, who not having a hive ready for her swarm, sagaciously took the utensil from under her bed, rather than to select an old rotten and musty hive, for a fine and early swarm. The expense of a new hive, compared with the advantage derived from it, is not worth the mention, and I am certain that no person who is alive to his own interest, will ever commit a blunder so egregious in the management of his Bees, as to put his swarms into old hives.

Having provided the requisite number of hives, the first step to be taken is to clear the interior from all projecting straws, and carefully to inspect the texture of the hive, that no holes may be left through which the light can penetrate. Should any holes be perceptible, they must be stopped with putty or mortar; this will save the Bees a great deal of trouble, as it is their first occupation on taking possession of a hive, to stop up every crevice by which the light can be admitted. The projecting straws may be removed, either by friction or singeing, I prefer the latter, as excessive rubbing is apt to injure the texture of the hive, and whilst it takes away one straw, generally raises another. The hives, being thus properly prepared, should be put into a dry place, to be ready for immediate use.

The hives this month should be visited every evening, and watch for the little speckled butterflies which fly out at twilight, and which enter the hives for the purpose of depositing their eggs.—These moths may be reckoned amongst the principal enemies of the Bees, for they carry on their works so secretly and insidiously, that a hive is often ruined before the proprietor is aware of it. I am, however, compelled to say, that I know of no method by which the ravages of these insects can be arrested in the common hive. They generally lay their eggs in their crevices at the top, or in some of the empty cells, and particularly those appropriated for the brood; the shape of the common hive prevents all examination at the top, and the actual destruction of the hive is completed before the proprietor is aware of it, or has even the slightest suspicion of it. There is therefore only one chance which the proprietor of Bees in the common hive can expect of arresting the evil, which is to catch the butterflies on their entering the hive, and an hour in the evening, when the labor of the day is done, may be well and profitably employed, in watching for these arch enemies of the Bees, and by annihilating their existence strike at the root of the evil at once.*

The queen wasp will often make her appearance this month, and every exertion should be used to kill her: let it be considered, that with the destruction of every queen wasp, several thousand enemies of the Bees are destroyed in embryo, and I must acknowledge that I always feel a peculiar satisfaction in entrapping one of the regal founders of a colony of the most inveterate foes which my favorite insects have to contend against. The keeper of a number of hives would find it his interest to give a premium for a certain number of queen wasps, in the same manner that farmers give a premium for sparrows; for I am certain, comparatively speaking, that the sparrow does not commit greater depredation upon the property of the farmer, than the wasp upon that of the apiarian. The best method of killing the queen wasp is to carry a small bit of cane in your pocket, and when her majesty has alighted upon a bush to give her an ungracious fillup, and lay her prostate upon the ground.†

An attack upon the weaker hives may often occur in this month, and should it escape the vigilance of the apiarian, the destruction of his hives may be the consequence. It may be necessary to state the signs by which a hive, on the eve of being attacked, may be known. In the first place, a number of Bees will be seen flying about the hive, and dogging about the entrance; some will venture on the stool, as if to try the temper of the inhabitants within; by degrees they will venture near to the entrance, until perceived by the Bees, an attack takes place, and the cowards immediately betake themselves to flight; in the second place, a number of Bees will be seen running in all directions before the entrance of the hive, shewing the anger of their dispositions by attacking without ceremony some of their own community, but instantly finding out their mistake, they desist from the attack, but their choleric disposition appears, by this disappointment, to be rather increased than diminished. Thirdly, if a number of Bees be seen lying dead on the ground before the hive, and if the wings of the dead Bees be in a perpendicular position, no doubt can then exist of the hive having undergone an attack, or that it is in danger of it;—the most prudent method to be adopted in this case, is to remove the attacked hive to a remote part of the garden, and by way of deceiving the attackers, put an empty hive in the place of it: this should be done late in the evening, and on the following morning the enemy will appear ready for the attack, and finding no opposition, will, coward-like proceed most resolutely to enter the empty hive, and finding not the expected booty, will, in a short time relinquish the attack and wisely betake themselves to more honest means of obtaining a livelihood.

Towards the end of this month, artificial swarms may be made, but not until the actual existence of drones has been ascertained. Notwithstanding this practice has been strongly recommended by some apiarians, I cannot but consider it, in general, as a forcing of nature, and diverting her operations out of her usual track. In warm climates some benefit may be derived from it, but after a series of experiments in this country, all of which have tended rather to the destruction and impoverishment of the parent hive, I have wholly desisted from making artificial swarms, nor would I recommend the adoption of the system to any persons but those, who are actuated by a desire of novelty, and of curiosity in the management of their Bees.

It is possible that towards the close of this month,* some swarms may be thrown, but as it is a very rare occurrence, the particulars of that most interesting event in the management of Bees, shall be reserved until the following month.

MAY.

This may be considered, in some respects, as the busiest month of the year, in the apiary.—The skill of the proprietor has brought his hives safely through the dangers of the winter and the spring, and he is now on the eve of reaping his reward. The drones have now for some time made their appearance, which is the first indication of a thriving hive, and I will now proceed to state the other signs, by which the novice may ascertain the certainty of the approaching swarm. In the first place, the increased heat in the interior of the hive, arising from a numerous population, may be ascertained by observing a few Bees standing at the entrance, with their wings in that continual and quick motion, that they can scarcely be perceived. Every action of these surprising insects appear to be actually founded on a sense of reasoning, for the heat of the hive no sooner begins to be disagreeable to them; than a number of Bees immediately station themselves at the entrance, and by an increased circulation of air, occasioned by the motion of their wings, temper the excessive heat of their domicile. It is also certain, that this motion of the wings is a demonstration of joy—for confine a Bee for a few hours, and then restore him to the hive, and he will stand for a minute or two waving his wings at the entrance. The second criterion of an increased population, preceding the swarming, is the small drops of perspiration which are visible at the entrance, called by the country people, the sweating of the hive. This perspiration is attended by a particular odour, resembling that of heated wax, and an increased blackness of the stool at the entrance. These may be called the prognostics of an increasing and superabundant population; but that which immediately precedes the swarming, and which may indeed be called the warning sigh to the proprietor, is the clustering of the Bees outside of the hive—hanging sometimes in large bodies under the stool, and crowding in such numbers round the entrance, that the working Bees can scarcely gain admission. In the middle of the day the Bees will also be seen running out of the hive, as if something in the inside were driving them out—and the drones will appear the most busy and active amongst them. This extraordinary activity will be apparent, and will increase daily, until the swarm flies off, and when the Bees have once taken to clustering and hanging out of the hive during the whole of the night—let the proprietor be then strictly upon his guard—for the following day perhaps, will give him the wished for addition to his stock.

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* *Bonner, the celebrated Scottish apiarian, who, if he had been guided by the light of education, would have made a most conspicuous figure in the elucidation of the natural history of the Bee, always considered that day a holiday in which the first drone made its appearance; he immediately collected his family, and often in the plenitude of his enthusiasm, the apiarian would in the language of Burns, "toddle right fu" to bed from the effects of his generous metheglin.*

* *Gentlemen who are prevented by particular occupations from watching their hives in the twilight, might employ a little girl or boy to watch for the butterflies, and a small premium given upon the number caught, would act as an excitement to their vigilance.*

† *I once killed in a gentleman's garden in Scotland twenty-nine queen wasps, in one morning; reckoning each wasp to found a colony, on an average, of two thousand, I had consequently destroyed nearly sixty thousand insects, which deserve the title of the bucaneers of the insect race.*

* *In the daily papers of the first week of March* 1819, *it was most gravely stated, that a swarm of Bees had settled upon a man's head, in Newport, in the Isle of Wight, on the 26th of February, and that they were hived without the individual sustaining any injury—they should further have stated, that the man had a wig on, and that the Bees were safely hived in the said wig, and were now at work in it—the one would deserve as much belief as the other.*

It has been the subject of dispute with many eminent Bee-masters, whether the Bees, a few days previous to the swarming, do not send out a scout to choose the place of their new habitation, and I am much inclined to adopt the opinion that they do. I have known instances in some apiaries, that the proprietor could always foretel the swarming of his hives, by observing small clusters of Bees in particular places, and especially on the chimnies where fires are not much kept.[*]—This may account for the difficulty which sometimes occurs, in retaining a swarm in a hive, and which is attributed by the majority of persons, to some dislike which the Bees have taken to the hive, but which in my opinion has its cause in the choice of a residence, selected by a certain number of Bees, previous to swarming.

The most usual time of swarming is from nine, A. M. to two, P. M. and the weather in general clear and bright. The Bees seldom or never swarm in high winds, nor when the sky is overcast—they will, however, often swarm on a sudden gleam of sunshine, and consequently when it is the least expected by the proprietor. After the usual signs of swarming have been exhibited, I would therefore advise every keeper of Bees to be constantly upon the alert—I have seen so many persons lose their swarms, from a supposed conviction upon their minds, that their Bees would not swarm on that particular day, on account of some adverse signs regarding the weather, or, what is still worse, on account of some ridiculous superstition or prejudice, like that which is prevalent in the north, that Bees never swarm on a Saturday, for the very powerful and cogent reason, that the following day is Sunday; that I am never disposed to relax in my endeavors to impress it upon the minds of every apiarian, that when Bees have once taken to clustering, not to lose sight of them from the hour of nine to two, or even later, until the swarm is actually on the wing. The cause is actually unknown to us, which prompts the immediate departure of the swarm, and until that cause can be ascertained, the moment when the effect will be perceptible must remain indefinite. The departure of a swarm certainly depends upon the Queen, but whether she be driven from the hive, or quits it voluntarily, is inveloped in great doubt. The monarchy of the Bees is so absolute, that I am inclined to attribute it to the former, for unless she betake herself to flight, her death would be the consequence. In this view of the case, the moment of her expulsion cannot be determined by any immediate exterior sign, although the preparations for it are outwardly displayed.—Thus it may please the reigning monarch of the hive, to expel the infant Queen from her territory at a time, when, according to human calculation and reasoning, or consistently with the rules of politeness, her abode ought to be tolerated; I have known her expelled during a shower of rain, on which occasion it was a most heart-rending scene, to behold her majesty in all her native dignity and beauty, and over whose golden form no breath of heaven had yet rudely dared to pass, on a sudden exposed to the pelting of the pitiless storm; but her majesty managed it well, for she settled on the gooseberry bush most proximate to the parent hive, and she was soon surrounded by her subjects, that not a drop of rain could reach her

This circumstance has been merely mentioned to prove to the inexperienced keeper of Bees, that his vigilance ought to be unremitting, whenever the signs of swarming have exhibited themselves.

A particular degree of laziness is often perceptible amongst the Bees, for some little time previously to swarming—very few Bees are observed to enter the hive, with that apparent bustle which distinguishes them when at full labor, and when they alight upon the board, instead of instantly entering the hive, as if loaded with farina or honey, they run about the entrance, apparently in search of some object, and then betake themselves to their wings again. This is one of the symptoms of an immediate swarm, but it requires some little practice to ascertain these particular movements of the Bees; for by a novice they would be passed over as indicating nothing of any consequence, whereas a due knowledge of them would place the proprietor so much upon his guard, that his swarms could never escape.

The swarm being once on the wing, keep your eye well upon it until it begins to settle; follow not the ridiculous custom of making a Babel noise, with shovels and pokers, and warming pans, and marrowbones and cleavers[*];—it has no more effect to make the Bees settle, than the music of a fiddle or a flute to make a deaf man dance, on the contrary I am well convinced, that whatever effect it may have, it is highly injurious, as it may prevent the Bees from settling where they intended. The first flight of a swarm is very seldom to any great distance from the hive,—and I have reason to believe that the first congregation of the Bees is merely to assemble the whole of the community in one body, and then to take their flight to their selected abode, in some hollow tree or hole in a house or barn. Being, however, arrested by the foresight of their owner, in providing a suitable dwelling for them, added to the instinctive fear of danger which appears to be so strongly impressed upon the Queen Bee, on her exposure to the open air, the Bees take to their hive and immediately commence their labors.

It is impossible to lay down any particular directions for the hiving of a swarm, as no two situations are similar in which it settles. The most easy situation is that in which the hive can be held under the swarm, and the Bees shaken into it; when the swarm settles on a post, or an upright branch of a tree which cannot be cut off, some difficulty then presents itself to the timid and inexperienced Bee-keeper. In all cases a goose's wing will be found of essential service, as the Bees can be brushed off the post or branch into the hive, and so long as the person takes care that none of the little knots of Bees drop upon the ground, which may perhaps contain the Queen Bee, he may proceed boldly with his work, and brush them all into the hive.

It will frequently happen that the swarm will settle in several clusters, in which case the difficulty of hiving them is encreased. It becomes, however, in this stage, a matter of doubt, whether every one of the clusters has not a Queen Bee, and consequently, whether every cluster should not be considered as a swarm within itself. Should this division of the swarm take place, the adept in apiarian science may search for the Queen Bees, and separate the swarm equally, giving to every Queen her proportion of subjects and thereby forming as many distinct hives, which if the swarm be early may prosper well; but to the novice, this undertaking is attended with so much difficulty, and the acquaintance with the particular make of the Queen Bee must be so accurate, (which I am sorry to say, but few cottagers possess,) that I would advise all the divisions or clusters to be swept into one hive, and let the monarchy of the Bees be for once elective and not hereditary.

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[*] *In an apiary belonging to a gentleman in Scotland--I was for several years witness to this circumstance, and we were always obliged to cover the chimney with a cloth, to prevent the Bees from entering it. A small cluster of Bees was always to be found in the chimney two or three days before the swarming of a particular hive, and one year they actually made good their lodgment in the chimney, from which I took them with a great deal of trouble, but no art nor skill could induce them to remain in the hive—for having selected the chimney, they were determined to have no other residence. This may be one of the effects of a female government, which, whether human or apiarian, is generally of an absolute nature.*

I had once a swarm which shewed such strong symptoms of this wandering disposition, that it flew from the hive four times—and four times I hived it afresh.—Having remarked that every time it flew out, its flight increased in distance, I fell upon the expedient of confining the runaways during the day time, by letting down both the perforated sliders, and giving them some food, and when it was almost dark, I gave the prisoners about five minutes liberty; I continued this plan for four days, and on the fifth, their truant disposition was completely quelled.

[*] *This custom of making a noise in order to make the Bees settle, was not adopted by our ancestors on the grounds for which we suppose it.—It was made use of as a warning to their neighbors, that a swarm had just departed from a hive, in order that if it settled in a garden not belonging to the proprietor of the hive, he might be able to claim the swarm, he having given notice, by the usual noise, that his hives had swarmed. I take this opportunity of informing the cottagers, that if a swarm settles in a neighbor's garden, the law allows him to enter that garden for the purpose of hiving the swarm—he being at the same time liable for any damage which he may commit in the garden, in securing the swarm. A person retaining a swarm of Bees, after notice being given to him, and proof adduced that the swarm belongs to a particular individual, is liable to an action. I wish this point to be distinctly understood by the cottagers, as many presume that a swarm becomes their property, if it lodges in their garden. Is a cow or a pig another's property if either break through a fence to regale upon a few turnips? and upon the same principle, a swarm of Bees does not become the property of the individual in whose garden it may have chanced to lodge.*

The question has been much agitated, whether a hive should be rubbed internally with honey or odoriferous herbs, previously to the swarm being put into it. Some persons use bean stalks for the preparation of a hive, which is something similar to fumigating an apartment with assafetida, as being agreeable to the olfactory nerves of human beings. It is my decided opinion that there exists not any necessity for the preparation of the hive at all.—If the Bees take a dislike to the hive, it is not the odor of the honey of Hybla which will induce them to remain in it; but should the prejudice for the preparation of a hive exist strongly in the mind of any particular individual, I will recommend a liquid to him, which, singular as it may appear, will be found more gratifying to the Bee, and possessing a greater inducement to it to take possession of the hive, than all the odors, real or artificial, which can be administered—and this liquid is—human urine; if any thing will induce a swarm to remain in a hive, it is a copious sprinkling of this liquid—it is a cure for almost every distemper of the Bees—and HUHLEN, the celebrated German apiarian was right when he said, on speaking of this liquid, that no person had any occasion to apply to an apothecary for a medicine for his Bees.

The swarm being shaken or brushed into the hive, it should be placed on a board and left near the place of its settling until the evening, when it should be carefully moved and placed on the pedestal in the apiary, taking care not to place it too near the parent hive.

Should any hive appear in this month wholly divested of drones, no swarm can be expected from it; but in this dilemma I would advise the adoption of the following plan. Watch at the entrance of that hive which appears to be the most populous in drones, and as they return from their flight, and are in the act of settling upon the stool, catch a number of them, say forty or fifty and confine them in a box or in any other safe, manner until the evening, then, when the Bees are almost all at rest, introduce the drones into the hive which appears to be without them, and they will be most thankfully and cordially received by their new associates.

The introduction of the drones is effected by simply placing them on the pedestal near to the entrance, and being complete sensualists, they will immediately take to those quarters, where the gratification of their senses awaits them. Should no swarm appear after the adoption of this plan, it may be fairly concluded that the Queen Bee is barren, or that the moth exists in the hive which prevents the Queen from laying her eggs. The chances are ten to one against a hive surviving the winter which has not thrown its swarms in the spring; the Bees either die away imperceptibly, or forsake the hive on a sudden; let me therefore strenuously advise every keeper of Bees to mark those hives which have not swarmed, and on the first symptom of a relaxation in their labour to join them to a strong and healthy hive.

Let no shrubs nor flowers grow to that height before the entrance of the hives as to impede the ingress and egress of the bees; the earwig will take advantage of them, and creep into the hive; this is a noxious insect to the Bee, and it is not easy to prevent it from making its lodgement good in the hive,* and when it is once made in the common hive, I know no other method of expelling it, than driving the Bees out of the hive, and smoking them from their hiding holes.

(To be continued.)

Internal Improvements.

A letter, whereof the following is a copy, was addressed on the 2d of February to C. Dorsey, Esq. an able and conspicuous member of the Legislature of this State. There is reason to suppose that it never reached him, and we rejoice at the opportunity of placing it, through this medium, before him and the publick. We have been taught to expect that the subject will be pursued by the same pen, and we congratulate our subscribers, that a department of this ournal, (Internal Improvements) which has been hitherto not so well supported as we could have wished to see it, should have now fallen into hands so well able to do it justice, as are our worthy and experienced friends, Lookers On, and Isaac Briggs.

Edit. Am. Farmer.

Sandy Spring, Montgomery County,
Maryland, 1*mo.* 31, 1822.

RESPECTED FRIEND,

Since I had the pleasure of conversing with thee at Annapolis, on the subject of Internal Improvements, for the promotion of which in this State thou hast laid a proposition before the Legislature, my mind has been turned to consider the causes of this prosperity or decline in States. What circumstances operate immediately or remotely to render them progressive, stationary, or retrograde in wealth, power, and happiness. In such an investigation no guide is equal to experience. By what we know has past, we reason to the future, with a clear and steady light. An active imagination may dazzle with its lustre, and raise splendid theories, but a correct judgment, by sober induction from *facts*, will lead us to those useful results which promote the happiness of man.

Agriculture, Commerce, and domestic Manufactures, in just proportion to each other, constitute true political economy, and form the most solid prosperity of a nation. In the United States, Agriculture is our principal concern; it is greatly predominant over all our other interests: Yet commerce and domestic manufactures, while a just proportion is preserved, are not only auxiliary to it, but without them it cannot prosper. Without commerce, agriculture could not dispose of its surplus productions, and industry would be destitute of a motive sufficiently strong to be effectual—without domestic manufactures, it would be poor, in debt, and dependent. The labor bestowed in forming a manufactured article enhances its value so greatly beyond that of the raw material, that there will always exist a destructive balance against the agriculturist, unless the manufacturer becomes his customer and neighbour, so as to expand his market for numberless articles which never would be produced for exportation. The more active and extended commerce is, and the more the Farmer has the choice of rival markets, the more Agriculture is benefitted. This benefit is most obvious in the vicinity of commercial cities, where on account of the short distance, transportation is cheap. As high ways and modes of conveyance are improved so as to cheapen transportation, the circle is enlarged, until it reaches the utmost parts of a state, and the wilderness becomes a fruitful field.

To the preceding propositions let us apply the test of experience; and for facts, we will not go to distant regions, or distant times, where it might be difficult to verify our statement, but we will confine ourselves to our own country, and to recent dates, where all may be familiar with the facts we state. We will examine the progress of population, from 1790 to 1820, a period of 30 years, in the whole United States taken collectively, and then in a few of the States taken separately, to wit, New York, Pennsylvania, Maryland, and Virginia. I presume, the progress of population will be admitted to be a just scale by which to measure the progress of wealth, power, and happiness.

The following table will exhibit the increase of population, for every period of ten years, from 1790 *to* 1820, *in every* 100,000 *persons.*

In	From 1790 To 1800	From 1800 To 1810	From 1810 To 1820
United States	34,976	36,507	32,954
New York	72,306	63,646	43,143
Pennsylvania	38,716	34,445	29,540
Maryland	9,371	8,823	7,043
Virginia	18,531	9,984	9,310

From the preceding we may deduce another table shewing the rate of increase *per annum*, for every 100 persons, and the number of years in which, *at that rate*, any given amount of population would be doubled, as follows:

In	1790 to 1800.		1800 to 1810.		1810 to 1820.	
	Rate of increase per centum per annum.	At that rate doubling in Years.	Rate of increase per centum per annum.	At that rate doubling in Years.	Rate of increase per centum per annum.	At that rate doubling in Years.
United States	$3\frac{1}{22}$	$23\frac{1}{9}$	$3\frac{1}{8}$	$22\frac{3}{11}$	$2\frac{10}{11}$	$24\frac{1}{3}$
New York	$5\frac{10}{17}$	$12\frac{3}{4}$	$5\frac{1}{20}$	$14\frac{2}{27}$	$3\frac{2}{3}$	$19\frac{1}{3}$
Pennsylvania	$3\frac{1}{3}$	$21\frac{9}{30}$	3	$23\frac{3}{7}$	$2\frac{3}{5}$	$26\frac{39}{50}$
Maryland	$\frac{9}{10}$	$77\frac{3}{8}$	$\frac{17}{20}$	$81\frac{49}{50}$	$\frac{17}{25}$	$101\frac{5}{6}$
Virginia	$1\frac{5}{7}$	$40\frac{17}{22}$	$\frac{22}{23}$	$72\frac{5}{6}$	$\frac{9}{10}$	$77\frac{6}{7}$

The proposition that population depends mainly on the means of subsistence has settled into a political axiom. Where those means are abundant and easily acquired, useful industry and inventive genius are excited and supplied with a powerful motive—to the necessaries of life are added its conveniences and comforts, early marriages are encouraged and population, wealth and power advance with rapidity. On the contrary, where the means of subsistence are scanty and difficult to be obtained, industry languishes in despair, genius dies in embryo, indolence, poverty and crime succeed, marriages are infrequent, and, with its concomitants wealth and power, population advances more and more slowly until, having reached its maximum, its decline commences.

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* *On mentioning this difficulty to a gentleman, who described himself to be a skilful entomologist, he declared that every measure which I might adopt to prevent the earwigs from* CRAWLING *into a hive could not be possibly attended with any benefit, for that the female earwig had wings, and* FLEW *into the hive, and drawing an earwig upon paper, he pointed out the* EXACT *part, where these said wings were concealed; I have since then dissected a number of earwigs but no wings could I discover. Perhaps* MY *earwigs were all males.*

The history of the United States, with the establishment of a census every ten years, affords us an instructive picture of the progress and circumstances of human society in the whole nation and in each particular state. We may observe that, with one single exception*, the ratio of increase is a *diminishing ratio*, as a plenum is approached. New York, from 1790 to 1800, advanced at the rate of 5 10-17 per centum per annum, and, from 1810 to 1820, the ratio has diminished to 3 2-3 per centum per annum. The ratio of Pennsylvania, for the same periods, has declined from 3 1-3 to 2 3-5—that of Maryland, from 9 tenths of 1 to 17 twentififths of 1—and that of Virginia, from 1 5-7 to 9 tenths of 1 per centum per annum. If the rate of the first period had remained and should continue uniform, New York would double her population every 12 3-4 years, and would have had at the late census 1,739,961 instead of 1,372,812 persons—Pennsylvania would double her population every 21 9-50 years, and would have had at the last census 1,159,425 instead of 1,049,398 persons—Maryland would double her population every 77 3-8 years, and would have had at the late census 418,308, instead of 407,350 persons—and Virginina would double her population every 40 17-22 years, and would have had at the late census 1,245,000 instead of 1,065,366 persons.—The causes that principally operate to promote the progress of population, are 1, unappropriated territory to be settled, which may be parcelled out on easy terms ; 2, Agriculture, commerce, and the mechanic arts. When a state is settled to its utmost limits that cause must cease to operate, except in the sub-division of large tracts of land held by wealthy individuals. As agriculture is improved, and aided by commerce and the mechanic arts, land, instead of being exhausted and neglected as a barren desert, is increased in fertility, produces abundance, and population becomes more dense, independent and happy.

Let us again contemplate the second table, and view the *rapid strides* of the state of New York towards wealth and power and the *slow progress* of Maryland. In 1790, the former contained but 340,120 persons, only 20,392, or about 1 seventeenth part more than the latter—in 1820 it contained more than *three times* the number of the latter. From 1790 to 1820, the *increase* of New York was 1,032,692 persons, and during the same period, that of Maryland was only 87,622, but little more than 1 twelfth part of the former. This is a mortifying view for poor Maryland, but if we wish to apply a remedy, it is necessary that we closely inspect the disease. Let us first enquire what circumstances have aided New York in her rapid march, and then what remain in the power of Maryland to apply to her own advantage.

I. New York has had, since 1790, a considerable extent of unsettled back lands, which she has by a wise policy, continued to distribute, in small portions, to industrious occupants ; but she is now approaching the limit of that source of increase. She has, at her metropolis, a sea-port, admirably adapted to extensive commerce—this advantage has been improved—agriculture has been promoted—domestic manufactures have lent their aid—and inland-navigation and other high ways have received *some* public patronage ; yet notwithstanding all these circumstances, which have raised her to the first rank among her sister states, we see her rate of increase is in a course of diminution, and, without some advancement in Internal Improvements, her march must become more and more slow until she arrives at her plenum of population. But that great state *is* advancing in Internal Improvements with spirit and success—in those vast enterprises which will shed around her a halo of glory, and be remembered to her praise when the triumph of the warrior will be forgotten. She has extended to agriculture a liberal legislative patronage ; and is making 415 miles of Canal, which will, by a *cheap* and easy conveyance, connect the commerce of the Atlantic Ocean, with that of 2000 miles of Lake shores, and of a vast extent of inland country. The effect of these improvements must be to render the country within their influence capable of supporting a happy population, double, at least, in amount, to the utmost number which, without them, it could be made to sustain. Far from envying the glory of New York, let us emulate her wisdom and enterprise. To Maryland, the admonition of reason is—"Go, and do thou likewise."

II. Maryland, it is true, has no unappropriated territory, to form new settlements, but she has other advantages which may be greatly improved ; she has some Atlantic coast—more than three fourths of both shores of one of the noblest bays in the world—and many fine rivers intersecting her in all directions, and offering to our acceptance the means of an improved inland navigation, which, by cheapening transportation, and multiplying markets in competition, would add new vigor to agriculture, more than double the productions of the earth, and greatly extend commerce and domestic manufactures. If, fearing innovation, we shut our eyes to the benefits of improvement, and without enquiry, march on in the same beaten path, which has conducted us to the present period, we may expect, in about a century more, to arrive at a population of 500,000 persons, as our *maximum ;* but if we, pursuing an enlightened and liberal policy, avail ourselves of the means which reason and the progress of science have raised to our view, and placed fairly in our power, we may awaken dormant energies, open new sources of wealth and render old ones more productive ; and Maryland may, without doubt, sustain comfortably, within her present boundaries, at least *one million* inhabitants. Effectual improvements in navigation, on the Potomac, on the Susquehanna, and on the cross-cut between the Chesapeake and Delaware, will require the concurrence of other states ; but the Patuxent, the Patapsco, the Monocasy, and many other rivers, entirely within our limits, will probably furnish, almost to their sources, the means of a navigation which will greatly cheapen transportation, and instead of diminishing will increase the facilities of mill-power. The Patapsco and the Potomac navigation may probably be connected, and the Patuxent intersected by a canal from the former river to the Eastern Branch at Bladensburg. Many other small canals for the accommodation of fertile neighborhoods, would probably be added by the enterprise of corporate companies. The expense of such a plan as is suggested, would be small in comparison with its benefits, and much less in absolute amount than is generally supposed. Besides diffusing prosperity among the citizens at large, it would ultimately become a source of revenue to the state.

But, however great may be the hope of benefit, a wise people will not, in pursuit of it, commit themselves blindly to even the most plausible theories, or pledge their funds to execute the schemes of any projector, without soberly and patiently examining for themselves, by means of their representatives in the legislature, after having before them full, clear and detailed estimates of expense, and statements of every fact which ought to influence their decision. Those states (New York and Virginia) which have now in successful progress immense enterprises, have laid their plans and commenced their operations in this way ; in the first place, making a thorough and minute examination, by skilful civil engineers, collecting facts and estimates of expense in detail, so as to exhibit the comparative merits of different propositions ; and then their legislatures, having a view of the whole ground, could decide safely and wisely. Many plans and enterprises, capable in themselves of producing much public benefit, have been ruined and have ended in disgrace, because they have been commenced without sufficient examination—without sufficiently considering contingencies and soberly counting the cost, on an accurate and full knowledge of the circumstances necessarily connected with their execution—a vague and delusive hope excited by a theory, decorated perhaps with the charms of fine language, has often misled the judgment, and a spirited beginning has been made, on means quite inadequate to the end, or for want of skill and experience in the projector, or in those to whom the execution has been committed, discouragement has followed and the plan has failed and been abandoned in despair. The *failure*, from those causes, of a plan intrinsically good, is not the *only* evil. It casts a shade of fear and distrust over every *new proposition*, however reasonable in design, or beneficial in probable consequences, and damps the spirit of useful enterprise.

I hope our state will not be contented to occupy, among her sisters, a rank lower than that to which she may attain by employing those means which are in her power, which wisdom enjoins and propriety sanctions. I hope she will join in the race of emulation. With caution for her guide and reason for her counsellor, the course will be a safe one. According to my judgment, in order to ensure the *benefits* and avoid the *evils* at which I have hinted, I respectfully propose the following

PLAN:

1.Create "A fund for Internal Improvements," to consist of productive stocks. Let such part as may be, from time to time, raised by taxes, be invested in some productive stock. Let the income only of the fund be applied to current expenditures, and let the surplus income be invested in productive stock. All investments and all expenditures to be specially authorised and directed by the legislature, which ought to have the complete control of the fund.

2. Place the care and administration of "The fund for Internal Improvements," with "a Board of Agriculture and Public Works," who are to execute the laws and resolutions respecting the fund and its uses, and to report annually to the legislature, the state of the fund and their proceedings.

By the above plan the designation of the fund would be *general—no particular work* would be specified as its object. It would be kept under the perpetual control of the legislature. It would be competent for any member, from time to time, to move for an investigation of any special object so as to bring before the body a full and distinct knowledge of that object in all its bearings.

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* *For the United States, the ratio of increase for the 2d period is greater than that for the 1st, During the 2d period Louisiana was obtained.*

The first question would then be—Is it, under all the circumstances of the case, expedient that the proposed work should be undertaken? If this question should be decided in the affirmative, the next question would be—how?—to what extent?

The governor of the state, for the time being, might be, ex officio, President of the Board.

I am, sensible that, on a subject worthy of a volume, I have given only hints—I have given them under the pressure of many other engagements—such as they are, however, they are completely at thy service. I have no objection that those gentlemen with whom I have the pleasure of an acquaintance, or any others, should see them, and though they be but hints, I have this consolation, that "A word to the wise is sufficient." Respectfully, thy friend,

ISAAC BRIGGS.

Washington City,
2 mo. 2, 1822.

FOR THE AMERICAN FARMER.

I send you a poem on "Hasty Pudding, by Joel Barlow," which I think merits insertion in the Farmer, as does every thing connected with the use of that *Magnum Dei Donum, Zea Mayz*, or Indian Corn. The plates are not without their interest, although, I doubt whether you will think them necessary for illustrating the text. I had intended to add this poem to a treatise on the cultivation and uses of Indian corn, of which I have arranged the outlines sometime since, but as it is uncertain when I shall be able to finish it, I have concluded to send you the poem for the amusement of your readers. This subject has not been untouched. Count Rumford has, more that twenty years ago, brought the alimentary properties and economical uses of Indian Corn before the British public, and gave receipts for several dishes in use in America—among others, that for "Hasty Pudding," stands conspicuous, and such of your patrons as have read his useful works, will recollect the importance he attaches to the proper manner of eating it, and the precise directions which he gives on the occasion—vol. 2d, p. 255. These the reader will see differ from those laid down by our poet, and which are illustrated by one of the plates in the poem. The gastronomes will adopt the way most pleasing to themselves. But no cultivator should permit a day to pass without having Indian Corn on his table, in some of the forms it is susceptible of being made to assume. The playful parody in the second Canto of the beginning of the celebrated prologue by Pope to the tragedy of Cato, will not fail to strike every one.

AGRIC. MEDICUS.

The Hasty Pudding,

A Poem in three Cantos, by Joel Barlow,
written at Chambery, in Savoy, January 1793.

Omne tulit punctum qui miscuit utile dulci.

He makes a good breakfast who mixes pudding with molasses.

CANTO I.

Ye Alps audacious, thro' the Heavens that rise,
To cramp the day and hide me from the skies;
Ye Gallic flags, that o'er their heights unfurl'd,
Bear death to kings, and freedom to the world,
I sing not you. A softer theme I chuse,
A virgin theme, unconscious of the Muse,
But fruitful, rich, well suited to inspire
The purest frenzy of poetic fire.
Despise it not, ye Bards to terror steel'd,
Who hurl'd your thunders round the epic field;
Nor ye who strain your midnight throats to sing
Joys that the vineyard and the still-house bring;
Or on some distant fair your notes employ,
And speak of raptures that you ne'er enjoy.
I sing the sweets I know, the charms I feel,
My morning incense, and my evening meal,
The sweets of Hasty-Pudding. Come, dear bowl,
Glide o'er my palate, and inspire my soul,
The milk beside thee, smoking from the kine,
Its substance mingled, married in with thine,
Shall cool and temper thy superior heat,
And save the pains of blowing while I eat.
Oh! could the smooth, the emblematic song
Flow like thy genial juices o'er my tongue,
Could those mild morsels in my numbers chime,
And, as they roll in substance, roll in rhyme,
No more thy awkward unpoetic name
Should shun the Muse, or prejudice thy fame;
But rising grateful to the accustom'd ear,
All Bards should catch it, and all realms revere!
Assist me first with pious toil to trace
Thro' wrecks of time thy lineage and thy race;
Declare what lovely squaw, in days of yore,
(Ere great Columbus sought thy native shore)
First gave thee to the world; her works of fame
Have liv'd indeed, but liv'd without a name.
Some tawny Ceres, goddess of her days,
First learn'd with stones to crack the well-dry'd
maize,
Thro' the rough sieve to shake the golden show'r,
In boiling water stir the yellow flour:
The yellow flour, bestrew'd and stir'd with haste,
Swell in the flood and thickens to a paste,
Then puffs and wallops, rises to the brim,
Drinks the dry knobs that on the surface swim:
The knobs at last the busy ladle breaks,
And the whole mass its true consistence takes.
Could but her sacred name, unknown so long,
Rise like her labors, to the song of song,
To her, to them, I'd consecrate my lays,
And blow her pudding with the breath of praise.
If 'twas Oella, whom I sang before,
I here ascribe her one great virtue more.
Not thro' the rich Peruvian realms alone
The fame of Sol's sweet daughter should be known,
But o'er the world's wide climes should live secure,
Far as his rays extend, as long as they endure.
Dear Hasty-Pudding, what unpromis'd joy
Expands my heart, to meet thee in Savoy!
Doom'd o'er the world thro' devious paths to
roam,
Each clime my country, and each house my home,
My soul is sooth'd, my cares have found an end,
I greet my long lost unforgotten friend.
For thee thro' Paris, that corrupted town,
How long in vain I wandered up and down,
Where shameless Bacchus, with his drenching
hoard
Cold from his cave usurps the morning board.
London is lost in smoke and steep'd in tea;
No Yankee there can lisp the name of thee;
The uncouth word, a libel on the town,
Would call a proclamation from the crown.*
For climes oblique, that fear the sun's full rays,
Chill'd in their fogs, exclude the generous maize;
A grain whose rich luxuriant growth requires
Short gentle showers, and bright etherial fires.
But here tho' distant from our native shore,
With mutual glee we meet and laugh once more,
The same! I know thee by that yellow face,
That strong complexion of true Indian race,
Which time can never change, nor soil impair,
Nor Alphine snows, nor Turkey's morbid air;
For endless years, thro' every mild domain,
Where grows the maize, there thou art sure to
reign.
But man, more fickle, the bold license claims,
In different realms to give thee different names.
Thee the soft nations round the warm Levant
Palanta call, the French of course *Polante*;
E'en in thy native regions, how I blush
To hear the Pennsylvanians call thee *Mush*!
On Hudson's banks, while men of Belgic spawn
Insult and eat thee by the name *suppawn*.
All spurious appellations void of truth:
I've better known thee from my earliest youth,
Thy name is *Hasty-Pudding*! thus our sires
Were wont to greet thee fuming from their fires;
And while they argu'd in thy just defence
With logic clear they thus explained the sense;—
"In *haste* the boiling cauldron o'er the blaze,
"Receives and cooks the ready powder'd maize;
"In *haste* 'tis serv'd, and then in equal *haste*,
"With cooling milk, we make the sweet repast.
"No carving to be done, no knife to grate
"The tender ear, and wound the stony plate;
"But the smooth spoon, just fitted to the lip,
"And taught with art the yielding mass to dip,
"By frequent journies to the bowl well stor'd,
"Performs the hasty honors of the board."
Such is thy name, significant and clear,
A name, a sound to every Yankee dear,
But most to me, whose heart and palate chaste
Preserve my pure hereditary taste.

There are who strive to stamp with disrepute
The luscious food, because it feeds the brute;
In tropes of high-strain'd wit, while gaudy prigs
Compare thy nursling man to pamper'd pigs;
With sovereign scorn I treat the vulgar jest,
Nor fear to share thy bounties with the beast.
What though the generous cow gives me to quaff
The milk nutritious; am I then a calf?
Or can the genius of the noisy swine,
Tho' nurs'd on pudding, thence lay claim to mine?
Sure the sweet song I fashion to thy praise,
Runs more melodious than the notes they raise.

My song resounding in its grateful glee,
No merit claims; I praise myself in thee;
My father lov'd thee through his length of days:
For thee his fields were shaded o'er with maize;
From thee what health, what vigour he possest,
Ten sturdy freemen sprung from him attest;
Thy constellation rul'd my natal morn,
And all my bones were made of Indian corn.
Delicious grain! whatever form it take,
To roast or boil, to smother or to bake,
In every dish 'tis welcome still to me,
But most, my Hasty-Pudding, most in thee.

Let the green Succatash with thee contend,
Let beans and corn their sweetest juices blend.
Let butter drench them in its yellow tide,
And a long slice of bacon grace their side;
Not all the plate, how fam'd soe'er it be,
Can please my palate like a bowl of thee.

Some talk of Hoe-cake, fair Virginia's pride,
Rich Johnny-cake this mouth has often tri'd;
Both please me well, their virtues much the same,
Alike their fabric, as allied their fame,
Except in dear New-England, where the last
Receives a dash of pumpkin in the paste,
To give it sweetness and improve the taste.
But place them all before me, smoking hot,
The big round dumpling rolling from the pot;
The pudding of the bag, whose quivering breast,
With suet lin'd leads on the Yankey feast;
The Charlotte brown, within whose crusty sides
A body soft the pulpy apple hides;
The yellow bread, whose face like amber glows,
And all of Indian that the bake-pan knows—
You tempt me not—my fav'rite greets my eyes,
To that lov'd bowl my spoon by instinct flies.

CANTO II.

To mix the food by vicious rules of art,
To kill the stomach and to sink the heart,

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* *A certain king, at the time when this was written, was publishing proclamations to prevent American principles from being propagated in his country.*

To make mankind, to social virtue sour,
Cram o'er each dish, and be what they devour ;
For this the kitchen Muse first framed her book,
Commanding sweats to stream from every cook ;
Children no more their antic gambols tried,
And friends to physic wondered why they died.
Not so the Yankey—his abundant feast,
With simples furnished, and with plainness drest,
A numerous offspring gathers round the board,
And cheers alike the servant and the lord ;
Whose well-bought hunger prompts the joyous taste,
And health attends them from the short repast.
While the full pail rewards the milk-maid's toil,
The mother sees the morning cauldron boil ;
To stir the pudding next demands their care,
To spread the table and the bowls prepare ;
To feed the children as their portions cool,
And comb their heads, and send them off to school.
Yet may the simplest dish, some rules impart,
For nature scorns not all the aids of art.
E'en Hasty-Pudding, purest of all food,
May still be bad, indifferent or good,
As sage experience the short process guides,
Or want of skill, or want of care presides.
Whoe'er would form it on the surest plan,
To rear the child and long sustain the man ;
To shield the morals while it mends the size,
And all the powers of every food supplies,
Attend the lessons that the Muse shall bring,
Suspend your spoons, and listen while I sing.
But since, O man ! thy life and health demand
Not food alone, but labour from thy hand,
First in the field, beneath the sun's strong rays,
Ask of thy mother earth the needful maize ;
She loves the race that court her yielding soil,
And gives her bounties to the sons of toil.
When now the ox, obedient to thy call,
Repays the loan that fill'd the winter stall,
Pursue his traces o'er the furrow'd plain,
And plant in measur'd hills the golden grain.
But when the tender germe begins to shoot,
And the green spire declares the sprouting root,
Then guard your nursling from each greedy foe,
Th' insidious worm, the all-devouring crow.
A little ashes, sprinkled round the spire,
Soon steep'd in rain, will bid the worm retire ;
The feather'd robber with his hungry maw
Swift flies the field before the man of straw,
A frightful image, such as school boys bring
When met to burn the Pope or hang the King.
Thrice in the season through each verdant row
Wield the strong plough-share and the faithful hoe ;
The faithful hoe, a double task that takes,
To till the summer corn, and roast the winter cakes.
Slow springs the blade, while check'd by chilling rains,
Ere yet the sun the seat of Cancer gains ;
But when his fiercest fires emblaze the land,
Then start the juices, then the roots expand ;
Then, like a column of Corinthian mould,
The stalk struts upward, and the leaves unfold ;
The bushy branches all the ridges fill,
Entwine their arms, and kiss from hill to hill.
Here cease to vex them, all your cares are done ;
Leave the last labors to the parent sun ;
Beneath his genial smiles the well-drest field,
When Autumn calls a plenteous crop shall yield.

Now the strong foliage bears the standards high,
And shoots the tall top-gallants to the sky ;
The suckling ear their silky fringes bend,
And pregnant grown, their swelling coats distend ;
The loaded stalk while still the burthen grows,
O'erhangs the space that runs between the rows ;
High as a hop-field waves the silent grove,
A safe retreat for little thefts of love,
When the pledg'd roasting ear invite the maid,
To meet her swain beneath the new-form'd shade ;
His generous hand unloads the cumbrous hill,
And the green spoils her ready basket fill ;
Small compensation for the two-fold bliss,
The promis'd wedding and the present kiss.
Slight depredations these ; but now the moon
Calls from his hollow tree the sly raccoon ;
And while by night he bears the prize away,
The bolder squirrel labours through the day.
Both thieves alike but provident of time,
A virtue, rare, that almost hides their crime.
Then let them steal the little stores they can,
And fill their gran'ries from the toils of man ;
We've one advantage where they take no part,—
With all their wiles they ne'er have found the art
To boil the Hasty-Pudding ; here we shine
Superior far to tenants of the pine ;
This envied boon to man shall still belong,
Unshar'd by them in substance or in song.
At last the closing season browns the plain,
And ripe October gathers in the grain ;
Deep loaded carts the spacious corn house fill,
The sack distended marches to the mill ;
The lab'ring mill beneath the burthen groans,
And show'rs the future pudding from the stones ;
Till the glad house wife greets the powder'd gold,
And the new crop exterminates the old.

CANTO III.

THE days grow short ; but tho' the falling sun
To the glad swain proclaims his day's work done,
Night's pleasing shades his various task prolong,
And yeild new subjects to my various song.
For now, the corn house fill'd, the harvest home,
Th' invited neighbours to the *Husking* come ;
A frolic scene, where work, and mirth, and play,
Unite their charms, to chase the hours away.
Where the huge heap lies center'd in the hall,
The lamps suspended from the cheerful wall,
Brown corn fed nymphs and strong hard-handed beaux,
Alternate rang'd, extend in circling rows,
Assume their seats, the solid mass attack ;
The dry husks rustle and the corn cobs crack ;
The song, the laugh, alternate notes resound,
And the sweet cider trips in silence round.
The laws of Husking every wight can tell ;
And sure no laws he ever keeps so well :
For each red ear a general kiss he gains,
With each smut ear she smuts the luckless swains ;
But when to some sweet maid a prize is cast,
Red as her lips, and taper as her waist,
She walks the round, and culls one favored beau
Who leaps the luscious, tribute to bestow.
Various the sports, as are the wits and brains
Of well pleased lasses and contending swains :
Till the vast mound of corn is swept away,
And he that gets the last ear wins the day.
Meanwhile the house-wife urges all her care,
The well earn'd feast to hasten and prepare.
The sifted meal already waits her hand,
The milk is strain'd, the bowls in order stand,
The fire flames high ; and, as a pool (that takes
The headlong stream that o'er the mill dam breaks)
Foams, roars and rages with incessant toils,
So the vext cauldron rages, roars and boils.
First with clean salt she seasons well the food,
Then strews the flour and thickens all the flood.
Long o'er the simmering fire she lets it stand :
To stir it well demands a stronger hand ;
The husband takes his turn ; and round and round
The ladle flies ; at last the toil is crown'd ;
When to the board the thronging huskers pour,
And take their seats as at the corn before.
I leave them to their feast. There still belong
More copious matters to my faithful song.
For rules they are, tho' ne'er unfolded yet,
Nice rules and wise how pudding should be ate.
Some with molasses line the luscious treat,
And mix like Bards, the useful with the sweet.
A wholesome dish, and well deserving praise,
A great resource in those bleak wintry days,
When the chill'd earth lies buried deep in snow,
And raging boreas drives the shivering cow.
Blest cow ! thy praise shall still my notes employ,
Great source of health, the only source of joy ;
How oft thy teats these pious hands have prest !
How oft thy bounties prove my only feast !
How oft I've fed thee with my fav'rite grain !
And roar'd, like thee, to find thy chrildren slain !
Ye swains who know her various worth to prize,
Ah ! house her well from Winter's angry skies.
Potatoes, Pumpkins, should her sadness cheer,
Corn from your crib, and mashes from your beer ;
When Spring returns she'll well acquit the loan,
And nurse at once your infants and her own.
Milk then with pudding I should always chuse ;
To this in future I confine my Muse,
Till she in haste some farther hints unfold,
Well for the young, nor useles to the old.
First in your bowl the milk abundant take,
Then drop with care along the silver lake
Your flakes of pudding ; these at first will hide
But when their growing mass no more can sink,
When the soft island looms above the brink,
Then check your hand : you've got the portion's due,
So taught our sires, and what they taught is true.
There is a choice in spoons. Tho' small appear
The nice distinction, yet to me 'tis clear,
The deep bowl'd Gallic spoon, contriv'd to scoop
In ample draughts the thin diluted soup,
Performs not well in those substantial things,
Whose mass adhesive to the metal clings ;
Where the strong labial muscle must embrace,
The gentle curve, and sweep the hollow space,
With ease to enter and discharge the freight,
A bowl less concave but still more dilate,
Becomes the pudding best. The shape, the size,
A secret rests unknown to vulgar eyes.
Experienc'd feeders can alone impart
A rule so much above the lore of art.
These tuneful lips, that thousand lips have tried,
With just precision could the point decide,
Tho' not in song ; the muse but poorly shines
In cones and cubes and geometric lines.
Yet the true form, as near as she can tell,
Is that small section of a goose-egg-shell,
Which into equal portions shall divide
The distance from the centre to the side.

Fear not to slaver ; 'tis no deadly sin,
Like the free Frenchman, from your joyous chin
Suspend the ready napkin ; or, like me,
Poise with one hand your bowl upon your knee ;
Just in the zenith your wise head project,
Your full spoon, rising in a line direct,
Bold as a bucket, heeds no drops that fall,
The wide mouth'd bowl will surely catch them all.

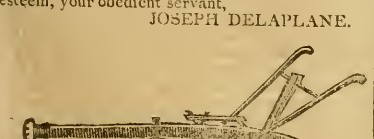
JOSEPH DELAPLANE'S NEW PLOUGH.

Montgomery County, 25th Feb. 1822.

JOHN S. SKINNER, ESQ.

Sir,—Through the politeness of my valuable friend, Mr. Reese, I am in possession of every No. of the American Farmer, up to 43 of the 3d vol. all of which have been regularly received, consequently attentively perused. I therefore tender you my thanks simply, but very *sincerely*, for the great advantage I have received from them ; at the same time regret extremely, that it is not in my power to contribute something for the advantage or amusement of those, from whom I have had so much—I however, beg leave to give you a description of a plough, which I invented last fall, for the purpose of aiding in the breaking up of my corn and tobacco lands. I had barely time to put it in operation before the frosts set in—the trial, however, was sufficient to ascertain that it will perform the work it is intended to do—my calculations are, to follow the barshare plough with it, in every furrow, the former to cut and turn six, the latter to cut and pulverize seven inches deep, which will give me thirteen inches in depth, of loose mould, to receive and hold the most abundant rains.—My substratum plough, as I name it, (the three coulters of which runs in a space of nine inches) merely pulverises the ground, and leaves it where it finds it—the above depth of thirteen (or even fifteen) inches, I can plough on any lands clear of stumps, stone, &c. I work three horses in the barshare and two (strong ones) in the substratum plough ; in the latter both horses walk in the furrow, one before the other—the plough is simple and not expensive in its construction, being composed of a beam, nearly the size and length of the beam of the barshare plough, with handles fixed similar to those on shovel ploughs : and near the hind end of the beam, are framed two pieces of timber, one on each side, nearly the size of the beam, and about two feet long, each of which receives a coulter directly opposite to each other; another coulter is inserted in the beam, about four inches behind the two first, so that they may not crowd each other: (several gentlemen who have seen my plough, say they would prefer having the centre coulter in front, which would render the plough less liable to choke, and I doubt not but it would be better)—each coulter is strongly braced to, and tightly wedged in, their respective timbers—near the centre of the beam, and directly in front of the coulters, is fixed a common plough wheel, by which we regulate the depth the plough is to run. I inclose you, indeed, a rough diagram of my plough, but have no doubt but your ingenuity will readily perceive the plan on which it is made. I had intended delaying any communication on this subject, until I had tested the advantages of my plough, but have now a desire that some abler farmer than myself will make experiments with it—the advantages which I expect to derive from the use of this plough, is that of having the ground pulverized deep, to retain moisture and admit the roots of plants, and still to have the *soil* near the *surface*. If you think this communication worth a place in your invaluable journal, you will oblige me by giving it a place there, provided you will dress it up in such a garb as to render it fit for the public eye—as to yourself, I am certain you will not ridicule my blunders, when I inform you that this was written in the evening after a laborious day's work, at trimming of apple trees. I fear you are now beginning to flatter yourself that you will presently come to the name of some conspicuous farmer of Montgomery. Not so—I am nothing but an overseer or manager. I have, however, the good fortune to be employed by a very indulgent, kind and worthy gentleman, W. Bowie, Esq. of Georgetown—he is much pleased with my plough, and would readily give you his opinion of it, if required of him. I am sir, with much respect and esteem, your obedient servant,

JOSEPH DELAPLANE.



Note by the Editor.—In our last we published the enquiry of the man of *science*, for an implement adapted to the accomplishment of a particular purpose—here comes a man of *practice* giving his satisfactory experience, with a clear description of the plough. We have not altered word or figure, and our readers will agree, that if Mr. D.'s plough of three coulters will do its work only as well as his pen has done, friend Brigg's object will have been fully answered, and the public much benefitted.

Editor's Correspondence.

Extract of a letter from the Right Honorable Sir John Sinclair.

I have the pleasure to tell you, that the Virginian Thorn, is likely to prove a very great acquisition to this country, at least if it will stand the severity of this climate. In one year's time it has grown from the seed you sent me, *eighteen inches* high:—and the season being open, it is still, (on the 31st Jan. 1822,) in full verdure. The nursery man to whom I entrusted the charge of it, (Mr. Lawson, Bland Street, Edinburgh,) wishes to purchase seed to the value of ten pounds sterling, if it can be procured of good quality, sent in a ship coming to Greenock. I have received from Mr. Charles E. Rowand, of Charleston, a number of cuttings of the Cherokee rose, which came in excellent order and I hope will be a valuable plant.

The following extract is from the pen of a Farmer of the first respectability in England, to the Editor ; whose object in publishing it is, to collect for the writer of the letter such information as will enable him on his arrival, to make a suitable selection of land, with the least loss of time. The views of the writer himself are sufficiently explained in his letter. He is known throughout England as a gentleman of high character, and the owner and breeder of the *most improved stock in the Kingdom*. The Editor of the Farmer, will esteem it a favor to be furnished with a line from any gentleman who may happen to see this, and may know of any place for sale, which they may suppose would be well adapted to the objects of his friend in England.—From such men, coming with such objects, our country cannot fail to derive lasting advantages.

Edit. Am. Farmer.

“ *28th January*, 1822.

“ The young Bull I now intend for you, is in “ my opinion a very superior one ; he is great in “ his points, and of a most beautiful colour. I “ have almost determined to accompany my “ friend and brother, whose intention it is to visit “ America in the spring ; in that case we will “ certainly avail ourselves of your hospitable and “ friendly invitation to visit you ; as it would be “ a high treat to us to be present at your Agri- “ cultural Meeting ; may I beg of you to write, “ informing me the time, as you name *May*, in “ your letter, and by your paper I observe the “ Meeting was held on the 7th and 8th of June, “ last year.

“ I fear I cannot, on account of my harvest, “ remain longer than a month in America, it “ will therefore be desirable to make the most of “ our time, and as our visit will be with a view to “ purchase land, I shall be much obliged to you “ to make enquiry, and point out to us those “ parts best worth attention ; as breeding *supe-* “ *rior stock*, will be our great object, it will be “ desirable we should fix upon some situation “ where the grass land is of excellent quality ; “ and regard should be had to an healthy cli- “ mate, and if possible not too hot ; I under- “ stand there is fine grazing land in Rhode “ Island, and particularly well adapted for “ breeding stock ; I should not like to go into the “ new settlements unless there are great induce- “ ments in *price* and *quality* of land ; it appears “ to us by the Map, that some situation in a line “ between Baltimore and Boston, we should “ prefer ; we have no objection to fix in the vi- “ cinity of Philadelphia, or New York ; we “ have heard the land in Susquehannah county, “ highly named by some, and much the reverse “ by an English writer named Howith ; such con- “ trary descriptions are unaccountable. I sup- “ pose you would recommend us to come out by “ one of the New York Packets, as the quickest “ sailing and most to be depended upon for time, “ as it is doubtful we could leave England on the “ 1st of April, the question is, should we arrive “ at Baltimore in time if we waited until the 1st “ of May, as I am told the Packets leave Liver- “ pool on the first of every Month.

“ It is not Mr. W.'s intention or mine to “ farm largely should we fix in America ; until “ we have had a few years experience ; and “ therefore farms of from 2 to 400 acres will be “ as large as we should for the present like to “ purchase.”

BLACK OATS AND TURNIP SEED,

Direct from Sweden.

A late arrival at this port, from Sweden, brought us, very opportunely, a supply of *black oats and turnip seed*, from our worthy friend, C. Hughes, Jr. Esq. the accomplished representative of his country at the Court of Sweden ; by whom we have been made the willing medium for the distribution of this valuable present, to the farmers of Maryland and other states They have both been widely distributed ; a small portion of each having been reserved for exhibition to, and experiment by, farmers attending our next Cattle Show, on the last two days of May.

We regret exceedingly having mislaid the letter which accompanied these articles, as it contained a much more particular account of them, and the reasons for the estimation in which they are held in Sweden, than is contained in the extract which we now publish from a letter of more recent date.

The oats are said to be heavier and far more nutritious than our common oats, bearing a comparison in these respects with our Indian corn.

The virtues of the Sweedish turnip have been, for three years past, the topic of discussion in agricultural circles, and its culture during the same period, has been the subject of extensive experiment. Two obstacles appear to have diminished its reputation and use. Its liability to destruction *by fly*, and the danger, after much expense and trouble, of having it prove to be of a *spurious kind*, often producing a mere stalk resembling that of a cabbage, instead of a large, firm, rich bulbous root. The present donation then from Mr. Hughes to the agricultural community is of much value, as it puts us in possession of the *genuine Sweedish turnip seed*, cultivated and preserved by respectable farmers, at his instance, with an express view to its being sent to this country. But the most agreeable aspect in which, individually, we view occurrences of this sort is, when they remind us that our public agents abroad have not in these “ piping times of peace,” resigned themselves to indolence or idle parade.—While apparently they may have little occupation in their official capacity, it is highly gratifying to find them thus justifying the confidence of their country, by endeavours to improve its greatest interests !—*Edit. Am. Farmer.*

Stockholm, 8th December, 1821.

To J. S. Skinner, Esq. Baltimore.

My dear Sir,—I took the liberty of recalling myself to your frendly recollection in a late letter, by Captain Damrell, of the American brig

Syren, from this port for Baltimore; that vessel sailed several weeks ago, but it is by no means improbable that you may receive *this* letter before she shall reach the U. S. as well on the general account of the season of the year, as of the unusually bad weather she must have experienced on the coast of Norway. You will perceive, that I have not omitted to follow you as far as my imperfect opportunities enable me, in your laudable and public spirited endeavours to improve the state of our agriculture; indeed I have derived great satisfaction in doing so.

I sent to you, by the Syren, a small quantity of Swedish black oats and turnip seed; part of them, as explained, is for your acceptance—the rest for distribution among some of our common friends. You will pardon my taxing you with this trouble. My present purpose in writing to you, is to state some circumstances, and to ask your advice and your aid on the same subject.—During an excursion to the mines some 18 months ago, I visited several of the principal *iron* establishments, which as you may imagine, are connected with extensive farms and cultivated tracts (in the hands of rich proprietors,) for the maintenance of the numerous labourers, employed in the different operations, connected with the *staple fabric* of Sweden. One or two of those proprietors, who are very eminent and very worthy men, in consequence of a conversation I had with them, on the subject, said that they would cultivate the *ruta baga*, in the most careful manner possible, and in a more extensive manner than they *had* done, on purpose to procure the best possible seed, for my agricultural friends at home; the year has gone round, and though the seed was ready at the sailing of the Syren, unfortunately it was in the country, and excepting the small quantity I sent you, was not to be had in time. I now, however, find myself in the possession of six hundred pounds of perhaps the most genuine and soundest Swedish turnip seed, that has ever been raised; indeed, it is impossible to have better. The gentlemen who raised it, are Mr. Tamm, of Osterby-Brok, one of the most famous country gentlemen of Sweden, Mr. Swedstierna and Count Schwiern. These gentlemen are known to Mr. Keyser, (or the two first of them are,) who was here some years ago. My object is to procure for the farmers of America, the best and most certain seed; and *I believe* I have completely succeeded.

Yours, &c.
CHRISTOPHER HUGHES, JR.

* * *

IMPROVEMENT IN THE
CULTURE OF POTATOES.

A correspondent has requested us to insert the following:—"The first year, (he says) I cut the potatoes in three pieces, the top, the middle and the bottom parts, (I suppose every person knows the top of the potato from the bottom, as the principal eyes are on the top) and planted these in three rows. The top plant was ten days earlier than the middle plant, and a much greater crop; the middle plant was earlier that the bottom, and a better crop; the bottom produced but a very indifferent crop. For some seasons past I have only planted the top eyes, and I may safely say, I have the best crop, and driest potatoes in the country. None need be deterred from this plan on the ground of waste; for after the top is cut off, the remainder keeps better and longer for use than if the potato was preserved entire. As proof of this, lay a whole potato on the top of the ground, or in any exposed place, and it will shew, that the top plants grow faster, and are many inches long, before there is any growth from the bottom."

DISEASES OF SWINE.

I have recently lost several fine, fat hogs; they were half grown when they died, after being unwell but a few hours; some of my neighbors thought it might be owing to the sore throat; but I could not discover any signs of inflamation, when I opened them. I hope, Mr. Skinner, that some of your correspondents may teach me how to prevent or cure this disease.

W. M.

Nelson County, Va. Feb. 1822.

This is rather late in the season for hogs to die in this way—about Christmas-time the disease is very prevalent; and so it be taken in the legitimate way, it is difficult to say, how a fat hog could make his exit in a more becoming manner.—*Editor.*

* * *

The whole revenue of Charles the First, from 1637 to 1641, including all that he derived from ship money, and other illegal exactions, amounted annually to *l.*895,819 5s.

The revenue of Scotland at the period of the union, is stated by Sir John Sinclair at *l.*110,694, a sum less by nearly *l.*20,000 than that of the present amount of sums levied under Turnpike Acts.

THE FARMER.

BALTIMORE, FRIDAY, APRIL 12, 1822.

PRICES CURRENT—CORRECTED WEEKLY.

Flour from the wagons, superfine, $6 1-4—Wharf flour $6 per bbl.—Wheat, white, 133 to 135 cents—Red, 130 to 133—Corn, white, 72 to 74—yellow, 70 to 72—Rye, 70 to 75—Oats, 33 to 35—Barley, 60—Whiskey, 31 cts.—Wool, 30 to 50—Beans, 130 cents per bushel, wholesale—*Grass Seeds*, Clover, $8—Timothy, $5—Orchard, 3½—Herds, 3 per bushel, at retail—Salt, coarse, 54 to 65 cents—Liverpool ground, 50—do. fine, 40 to 44 per bushel—Plaster of Paris, ground, $7 per ton or 125 cents per bbl.—Mess Beef, $11—do Pork, 13—Herrings, 2½ to 2¾—Shad, 5½ to 6 per bbl.—Codfish, 3 to 3½ cts.—Hams, 11—Cheese, 11—Butter, 20 to 25 per lb.—Eggs, 10 to 12 cents per doz.—Cotton, Georgia Upland, 15 to 17 cents per lb.—Louisiana or Alabama 18 to 20—Feathers, 40 cts. per lb.—Tar, 175 cts.—Turpentine, 175 to 200—Rosin, 150 per bbl.—Spirits of Turpentine, 45 to 50 cents—Varnish, 30—Linseed Oil, 75 to 80 per gallon—MARYLAND TOBACCO, fine yellow, $20—do. spangled, $10 to 18—fine red, fired, $12 to 14—good, do. do. $8 to 10—Patuxent, good red, $9 to 10 common, do. $5 to 8—inferior, $3 to 4—Eastern Shore, $3 to 4—seconds, 1½ to 5.

EXILE.

The imported "Cleveland Bay," will be let to Mares the approaching season, at Carroll's Manor, 15 miles from Baltimore on the Frederick town turnpike. The season to commence on fifteenth of April, and end on the fifteenth of July. Terms TWENTY DOLLARS, and one dollar for the groom, which must accompany the Mare, for if omitted, the horse will in no case be brought out of the stable, so it will be useless trouble to send the Mare—50 cents a week pasturage, which must be paid before the Mare is removed. An experienced groom has charge of the horse, and every attention will be given to Mares, but no accountability for accidents of any kind.

EXILE is a beautiful dark bay sixteen hands high, will be three years old in May He is admitted by the best judges who have examined him to be the finest description of horse ever imported into this country, as well on account of his breed, as his great bone and fine figure. The sire of Exile is considered one of the most splendid coach horses in England; his grandsire is the famous Yorkshire horse Mollineaux, sold for 1100 guineas; it is the mixture of the Cleveland Bay with the racing blood, which produces the old English hunter; and it is the cross from them that makes the Jersey horse more valuable than the Southern, giving them bone, size, and high round action. The colour of these horses is confined to the various shades of bay, always with mealy noses, and they combine the fine symmetry, smoothness of coat and clean legs of the blooded. In fine it is now admittd in Europe that this breed only can increase the size of the blooded horse without taking from their activity, wind and figure.

BARNEY DEAN, Manager.

☞ EXILE will remain 15 days at Crowl's stables, in the city of Baltimore.

Tuckahoe and Young Tom.

The very celebrated race horse TUCKAHOE, bred by John Wickham, Esq. of Richmond, will stand the ensuing season at Wooten's tavern on the York road and at the Maryland tavern, on the Frederick road—each four miles from Baltimore. He will go to the Maryland tavern on WEDNESDAY Morning, and there remain until SATURDAY night—the remainder of the week he will be at Wooten's.

YOUNG TOM,

Bred by Cornelius Howard, esq. and got by Judge Winchester's Old Tom, will stand during the same period, changing places with Tuckahoe; so that while one is at Wooten's the other will be at the Maryland tavern, and so *vice versa*.

That those disposed to patronise the best breed of Horses may this year have no excuse, on the score of *terms*, Tuckahoe will be let to Mares at the very reduced rate of $10 each, and Young Tom at $5—to be sent in all cases with the Mares; if not paid before the first of July, double those sums respectively will be rigorously exacted.

Tuckahoe has been sent into this neighborhood at the instance of Gen. Charles Ridgely, of Hampton, who once owned him, and who pronounces him in his blood and his foals, equal to any horse in the Union.

Good pasturage will be provided, for Mares from a distance, but no responsibility for accidents or escapes.

Agents for the owners:

At Wooten's, JOHN WOOTEN.
At the Maryland Tavern, RICHARD STONE.

PEDIGREE.

TUCKAHOE, was got by Florizel, who was never beaten, and was got by sorrel Diomede an imported son of the celebrated Eclipse, out of a full bred mare. Tuckahoe's dam was got by the imported horse Alderman, who was got by Pot-8-o's, one of the best sons of Eclipse, out of Lady Bolingbroke who was got by Squirrel out of Cypron, the dam of King Herod, her dam by Clockfast, an imported horse of high character, grand dam by Col. Symmes' Wildair, a noted horse of the best blood in this country, out of a thorough bred mare.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, at the North West corner of Market and Belvidere-streets, Baltimore, *where every description of Book and Job printing is executed with neatness and despatch*—Orders from a distance for Binding, with proper directions, promptly attended to.

AGRICULTURE.

The Cottager's Manual.

FOR THE MANAGEMENT OF BEES THROUGHOUT EVERY MONTH OF THE YEAR.

To the president, vice presidents, the treasurer, and members of the British Apiarian Society, who, by their laudable endeavors, have encouraged the culture of the Bee, amongst the cottagers, this manual is dedicated, with feelings of the most profound respect, by their secretary.

[CONTINUED.]

JUNE.

The second swarms are generally thrown at the early part of this month, and towards the latter the virgin swarms may be looked for. In regard to the second swarms, much judgment is required in the management of them, and in many respects it is the most difficult part of apiarian science, for every thing concerning the second swarms depends upon the skill and attention of the proprietor. In the first place, a second swarm gives no signal of its departure, nor is the time of its leaving the hive limited to any number of days; I have known a second swarm leave the hive on the second day after the first swarm, and I have known it not to leave it until the tenth; there being therefore no positive indication of the departure of the second swarm, it behoves the proprietor to keep a vigilant eye upon his hives, and to take particular notice from which hive the swarm departed. Many parent hives are destroyed by exuberant swarming, and it becomes, therefore, a part of the duty of the apiarian rather to return the second swarm to the parent hive, than to keep it as a separate colony. It must further be considered that second swarms are in this country very seldom or ever worth preserving, and the only time when any value can be attached to them, is when two fly off together, and a junction can be formed of them. In this case, that which individually possessed no value, becomes by union of intrinsic worth, for it is certain, that two *early* second swarms united, are very little inferior in value to a first swarm. Nor is this junction of two swarms attended with any difficulty. Supposing the two swarms to have alighted upon separate branches—proceed to shake one of them into the empty hive, and then immediately shake the other; leaving it to the Bees to kill the superfluous Queen Bee. This advice is however given upon the supposition that the proprietor has not the skill nor the courage to undertake the massacre of one of the Queens himself—for there cannot be a question as to the comparative excellence of the two methods—I would rather prefer groping in a mass of Bees for an hour, to catch one of the Queens, than leave the operation to be performed by the Bees; and this opinion is founded upon the principle that it is not only possible, but very probable, that in the conflict both of the Queens may perish.

If, however, a second swarm should fly off, either early or late in the season, *singly*, I would at all times advise that it should rather be returned to the parent hive than preserved as a separate stock; and to effect this aim, it is necessary to place the back of a chair parallel with the entrance of the hive, over which a sheet or table cloth may be spread; then holding the hive containing the second swarm over it, give a few sharp knocks at the top, and the Bees will fall immediately on the cloth; proceed then, either with your finger or a stick, to guide a few of the Bees to the entrance of the parent hive, and they instantly testify their joy by a humming noise, and crowd into the hive. This is is the best period to catch the Queen Bee; and to those who are well acquainted with her person, it is by no means a task of difficulty; for as the Bees are then in a state of disjunction, the person of her majesty is easy to be recognised, and her capture becomes inevitable.

In regard to the third swarms, there is no other method to be adopted with them than to return them instantly to the parent hive, it is the height of folly to keep them.

It frequently happens this month, that the Bees in the common hive lie out in clusters, and by the ignorant cottagers it is supposed to be an indication of an approaching swarm, or they give a still more erroneous reason for it, namely, that it is the old Bees expelling the young ones from the hive; the actual cause is the want of room in the hive for the Bees to deposit their store, and the only method of obviating this injury to the welfare of the hive, is to place an eek consisting of three or four bands under the hive, and the Bees will immedintely commence their labors in the empty space,—this is, however, speaking of the common hive,—in the Huish Hive it is easy to extract a comb, and thereby not only obtain a certain quantity of honey, but the vacuum becomes replenished with a fine new comb, which in the following year will serve as a depository of the brood, whereas the combs with which the eek is filled, are seldom of any use after the year in which they were made.

This is one of the best months in the year to establish an apiary by the purchase of the first swarms, but in this, as in most other cases of human transactions, deception is the groundwork of the action; it is not one case in twenty in which an individual receives a first swarm, although he pays the full price for it; for unless he be actually present at the departure of the swarm, and takes it immediately to his own premises, he generally receives a second swarm; and as in this case a failure is almost certain, the purchaser becomes discouraged, and the Culture of the Bee falls into disrepute. For how is a second swarm to be distinguished from a first by a mere scholar in the art? It is only by the number of the Bees that even an adept can tell it on the first view of the swarm, although there is one particular circumstance attending the working of a first and second swarm which will immediately distinguish them, and this is, that the first swarm invariably begins the construction of the combs in the middle of the hive, whereas a second swarm begins the combs at one of the sides. Few persons, however, have the courage to turn up a hive to inspect the manner in which the combs have been worked, and from a direct ignorance of the actual nature of Bees, they are lulled into a false security, and the consequence is, a failure in all their apiarian undertakings.

It will frequently happen that third swarms are thrown about the middle of this month, but being of no use whatever, individually speaking, they ought without any further consideration to be returned to the parent hive.

A particular, but rather a false value is placed upon the virgin swarms, which are generally thrown this month, and it is supposed that the honey made by a virgin swarm is superior to that which is made by a first swarm. The error of this supposition is too obvious to require any comment; nor do I consider the possession of a virgin swarm to be attended with any benefit to the proprietor, and it is certainly a manifest injury to the hive which has produced it. In the common hive there is no method of obviating it; but in the Huish Hive, I would recommend immediately the extraction of the side combs; and should the swarm depart after the operation, to return the Bees to their parent hive; and as a vacuum will then be found in which they can work, the profit will be greater to the proprietor than if the swarm had been kept separate. The great objection which exists towards the keeping of late or virgin swarms arises from the uncertainty of the weather, and the chance of the Bees not making a sufficiency of food to maintain them during the winter.

It will frequently happen, that for several days after the swarm has been hived, the rainy weather sets in, which prevents the Bees from collecting any food—and many fine swarms are annually lost from want of proper attention to this circumstance. In all cases, when the weather proves unfavorable after the hiving of a swarm, some food should be administered to the Bees; and care should be taken that the food be given at night, and the vessel or plate in which it was put should be taken away as early in the morning as possible. Every precaution should be taken at this season of the year not to entice the stranger Bees to a particular hive, by the administration of food; and for this reason, it would be advisable to remove the hive to which the food is given to a remote part of the garden, and at the greatest possible distance from the apiary.

The purchased swarms should be removed as soon as possible: the combs at this season of the year are very soft, and the slightest motion is apt to break them.

JULY.

The swarming season may now be considered as past, and the chief attention of the apiarian must now be directed to preserve his hives from the attack of stranger Bees and Wasps.

As the influence of the sun is very great this month, it would be advisable to shade the hives, as many are annually destroyed by melting of the combs; particularly those of the swarms, which from their newness are more liable to be influenced by the heat. This is a proper season of the year for depriving a hive of a part of its store, as little doubt exists that the vacuum will soon be replenished—some caution is however necessary, as it is very probable that the lower part of the combs may be filled with brood, which on no account should be taken away.

It is during this month that the attentive apiarian will see the first symptom of the approaching decay of some particular hives; and although it be impossible to prescribe particular rules for every case that may present itself in an apiary, yet a correct knowledge of the particular signs by which a dwindling hive may be known, may ultimately lead the apiarian to the adoption of those remedies by which the hive can be saved. To distinguish one of these signs, it is necessary that the apiarian should know the difference between a Bee entering the hive with honey, and one without: the shape of the former is cylindrical, and presents a glossy appearance; its body appears extended, as if inflated with wind: whereas the body of the Bee without honey is contracted, and the division of the wrinkles is more easy to be discerned. Now one of the symptoms of decay is, when few Bees of the cylindrical shape are observed to enter the hive;—the second is, when few are seen to enter with the pellets of farina on their legs. Third, when an apparent inactivity or tranquillity reigns in the hive. Fourth, when ants, earwigs, or other vermin, are observed to enter the hive without experiencing any opposition from the Bees. Fifth, when the Bees desist from taking their periodical flights. Sixth, when on turning up the hive, the Bees shew no symptoms of anger; but rather croud to the top of the hive. Seventh, when no brood appears sealed in the cells.—Eighth, when the Bees reject the food which is given them. These cases all require a particular system of management, and much must be left to the judgment and skill of the apiarian.

The drones are very often killed in this month, and a particular value should always be put upon those hives which kill their drones the earliest.—I have invariably found that the produce of those hives is much greater than those which kill their drones late in the season.

AUGUST.

In many counties of England, and particularly the western, the keepers of Bees begin in this month to suffocate their Bees, from an ill-founded supposition, that the honey season is over, and that the Bees are thenceforth living upon their store. It is, however, a plan not only injudicious, but highly injurious to the proprietor; for it must be obvious to every one that the month of August is particularly remarkable for the bloom of certain plants and flowers, from which the Bee collects a vast store of honey. I have only to notice the mignionette, one of the richest flowers which blows in regard to honey, and the heath, which continues in bloom until the month of October. This month is also noted for being more sultry than any other of the year, and consequently a greater secretion of the mellifluous fluid will be the result:—this is evident from the honey-dews* with which this month, in a fine season, particularly abounds; and few people are ignorant of the increase of weight which will be perceptible in a hive, after a few days on which the honey-dew has abounded. It is, in fact, the manna from heaven for the Bees, and I would not suffocate a single hive, until every hope had vanished of a honey-dew. It also happens in this month that the Bees begin to kill their drones, which is the immediate signal for the ignorant Bee-master to purchase a bundle of matches, wherewith to suffocate his Bees;—this is performed on the erroneous supposition that the massacre of the drones indicates the close of the honey season; but it is impossible to entertain a more erroneous idea, it having, in fact, no affinity with the honey season. It is, in the first place a certain indication of a prosperous hive; and, in the second, it is a proof that the progress of fecundation has ceased in the hive for the season: I would not, therefore, advise any person to take that particular event as the signal for the suffocation of his Bees; for in some hives it takes place very early, and the proprietor, by this premature step, loses a great portion of that honey which the Bees would deposit in the cells, in which the Bees were bred. So far from attempting to suffocate my Bees, were I ever guilty of such a barbarous practice, I would not hesitate to take from my hives a portion of the honey, with the well-founded hope of the vacuum being replenished before the close of the season. There is no other just criterion for the suffocation of the hives in this country, than the total decay of all the wild and cultivated flowers and shrubs; and until that has taken place, no suffocation of the hives should take place.* Though a decided enemy to the system of suffocation, I have been thus explicit upon it; for as long as it prevails amongst the cottagers it is as well that the best method should be adopted, by which the greatest profit can be obtained.

This month is the best in the year for the proprietor to determine on the particular stocks, which it will be prudent to preserve through the winter; and let him keep a strict watch upon the weaker hives, as the pillaging system is about to commence.

The common spider, this month, spins its web in our gardens; and it is incredible the number of Bees which are annually destroyed by this artful insect. Let it be the constant study of every individual, who values the life of a Bee, to destroy every spider which he meets with in his garden; nor can this advice be too often repeated to the cottagers, who, having, generally speaking, no idea of keeping their apiaries clean, suffer the spiders to spin their webs on the very stools, on which their hives are placed. A more efficacious method of impoverishing the population of their hives could not be adopted.

There are two points to which the attention of the apiarian should be this month directed:—the first is, the pillage of the hives by stranger Bees; and the second is, the attack of the hives by wasps. In the first case, a removal of the attacked hive has been recommended; and certainly, if the removal could be effected to that distance, beyond the range of the attacking Bees, the calamity might at once be put a stop to; but as this is an advantage which can seldom be enjoyed by a keeper of Bees, I would recommend instead of it, that on the very first symptom of an attack, the entrance should be immediately contracted, so as to admit only two Bees to enter at a time, and every crevice about the hive by which a Bee could enter carefully closed. The tin entrance attached to the Huish Hive is well adapted for this purpose, the opening can be contracted or enlarged at pleasure, with celerity and cleanliness, and I believe I can be borne out in my assertion, by the skilful proprietor himself, that the hives of Captain Call, of *Taplow Hill*, during one of the most violent attacks which I ever beheld, upon twenty-eight hives at one time, were all saved by the use of that simple instrument. The attack of the wasp may be defeated in the same manner, but this insect appears to possess a degree of boldness and cunning, which is wholly foreign to the Bee. It will with the greatest adroitness watch its opportunity to enter the hive, but it will never enter at the front, if by the negligence or carelessness of the proprietor an opening has been left behind. I have good grounds for believing that more hives are impoverished by the robberies of the wasps than is generally conceived, and the most certain way of diminishing the number of these arch-enemies of the Bees, is to hunt out their nests, and either blow them up with gunpowder or suffocate the horde of thieves by a handful of brimstone.*—The cottager, in general, entertains an opinion that the wasp kills his Bees; this is, however, by no means the case, for the wasp will pay no attention whatever to the Bees, if he can but succeed in stealing the honey; it will, however, frequently happen, that the natural cunning of the wasp enables it to discover a weak hive, and the continual annoyance which the hive consequently undergoes, added to the robbery of the honey, obliges the Bees to vacate the hive, leaving the whole of its contents a prey to the marauders. A cottager, therefore, cannot be too attentive to guard his hives against the attack of the wasp—it is not of that trifling consequence which many keepers of Bees attach to it, but is the cause of the ruin of many wholesome hives, which the imprudence or negligence of the proprietor has left exposed to the depradatory attack.

Having adopted every precaution requisite against the wasp and other insects, and the proprietor having convinced himself that his hives are in good health, the less they are incommoded this month, the better. If the sun beats very strongly upon a hive, which frequently happens the beginning of this month, a shade should be immediately applied to it. I have known many hives completely ruined by the melting of the combs from the influence of a meridian sun, and the whole of the Bees actually suffocated in their own sweets.

(To be concluded in next number.)

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* *Although custom has sanctioned the appellation of honey-dew to the saccharine and glutinous fluid which is often perceptible in summer on the oak, the bramble, the laurel, and other trees and shrubs, I consider the appellation to be false; but I make use of the term, for the best of all reasons, that I do not know of another, by which I could make myself intelligible. Were it in reality a dew, it would be found indiscriminately on all trees, shrubs, and flowers; but I believe it to be an exudation from certain trees, arising from a particular secretion of their juices, operated upon by the exterior atmosphere.*

* *As a proof that the hives, by proper management, will even increase in food after September, I refer the reader to the Transactions of the Western Apiarian Society, in which it is stated, that a hive removed to a heath, on the 3d August, was brought back on the 3d November, with an increase of three pounds; another was moved on the 1st September, and brought back on the 19th October, with an increase of one pound. It must be stated, that during the time the hives were at the heath, they had only fifteen dry days; what then would have been their increase, had the weather been uniformly fine?*

* *The devastation committed in the year 1819, by the wasp, was almost incredible. One gentleman adopted the expedient of offering a premium for every wasp's nest, and in a very short time 132 were brought him; calculating every nest to contain 5,000 insects, which is taking it at a very low ratio, 660,000 insects were destroyed in the vicinity of one mansion.*

FROM THE HALLOWELL GAZETTE.

Remarks on the means of preserving inhabited buildings, in which much wood is employed, from destruction by fire.

The recent calamity by fire at Bowdoin College, in this state, and the fear that all the necessary precautions which the case admits, may not readily occur to those who may be charged with the restoration of this building; call for an attempt to establish some *principles* on this subject; especially as they will have extensive application in a country abounding in wooden architecture.

We shall begin by noticing Lord Stanhope's method on these occasions; and after producing evidence "to put the fact of the success of his experiments beyond all possible doubt," shall proceed to some short remarks connected with the subject, shewing that much may be done consistent both with convenience and economy, even in many cases where buildings have been erected without previous attention to the object in question.

Description of a most effectual method of securing buildings against fire, invented by Charles Lord Viscount Mahon, [who afterwards became the well known Earl Stanhope,] F. R. S.

Taken from the Philosophical transactions of the Royal Society in London, for 1778.

Read July 2, 1778.

Sec. 1. The new and very simple method which I have discovered of securing every kind of building (even though constructed of timber) against all danger from fire, may very properly be divided into three parts, namely, *Under-flooring*.

Extra-lathing, and *Inter-securing** :—which particular methods may be applied in part or in whole, to different building; according to the various circumstances attending this construction, and according to the degree of accumulated fire to which each of these buildings may be exposed, from the different uses to which they are meant to be appropriated.

I. Sec. 2. The method of *under-flooring* may be divided into two parts; namely, into *single* and *double* under-flooring.

The method of *single* under-flooring is as follows: A common strong lath of about one quarter of an inch thick (either of oak or fir) should be nailed against *each side* of every joist and of every main timber which supports the floor which is intended to be secured. Other *similar laths* ought then be nailed the *whole length* of the joists, with their ends butting against each other: These are what I call *fillets*. The top of each fillet ought to be at one inch and a half *below* the *top* of the joists or timbers against which they are nailed. These fillets will then form (as it were) a sort of small *ledge* on each side of all the joists [and timbers.]

Sec. 3. When the fillets are going to be nailed on, some of the *rough*† *plaster* (hereafter mentioned, Sec. 9,) must be spread with a trowel all along the side of each of the fillets, which is to lay next to the *joists*: in order that those fillets may be well bedded therein, when they are nailed on; (so that there should not be any *interval* between the fillets and the joists.)

Sec. 4. A great number of any common laths (either of oak or fir) must be cut nearly to the length of the *width* of the intervals between the joists. Some of the *rough plaster* referred to above (Sec. 3) ought to be spread (with a trowel) successively upon the *top* of all the fillets; and along the sides of that part of the joists which is *between* the top of the fillets and the [upper] edge of the joists. The *short pieces* of common laths, just mentioned ought (in order to fill up the intervals between the joists that support the floor) to be laid in the *contrary direction to the joists*; and close together, in a row; (so as to touch one another as much as the want of straitness in the laths will possibly allow without the laths lapping over each other:) their *ends* must rest upon the fillets spoken of above (Sec. 2;) and they ought to be well *bedded* in the rough plaster. It is not proper to use any *nails to fasten down* either *these* short pieces of laths, or those *other* short pieces hereafter mentioned (Sec. 7.)

Sec. 5. These *short* pieces ought teen to be covered with one *thick* coat of the *rough plaster*, spoken of hereafter (Sec. 9;) which should be spread all over them; and which should be brought (with a trowel) to be *about* level with the tops of the joists; but *not above* them. The rough plaster, *in a day or two*, should be trowelled all over close home to the *sides* of the joists; but the *tops of the joists* ought not to be any wise covered with it.‡

Sec. 6. The method of *double* under-flooring is, in the first part of it, exactly the same as the method just described; (the fillets and the short pieces of laths are applied in the same manner:)—but the coat of *rough plaster* [applied here] ought to be little more than *half as thick*, as the coat of rough plaster applied in the method of single under-pinning.

Sec. 7. In the method of *double* under-flooring, *as fast as this coat of rough plaster is laid on*, some *more* of the short pieces of laths (cut as above directed, Sec. 4) must be laid in the intervals between the joists, upon the *first* coat of rough plaster; and each of these short laths must be (one after the other) bedded deep and quite sound into the rough plaster whilst it is *soft*. These short pieces of lath should be laid also as close as possible; and in the same direction, as the first layer of short laths [and without being fastened with nails.]

Sec. 8. A coat of the same kind of rough plaster should then be spread over this *second* layer of short laths, as there was upon the first layer above described. This coat of rough plaster should (as above directed, Sec. 5, for the method of single under-flooring) be trowelled level with the *tops* of the joists, (but it ought not to rise *above* them.) The *sooner this second coat* of rough plaster is spread upon the second layer of short laths just mentioned (Sec. 7) the better.

What follows (as far as Sec. 13) is *common* to the method of *single* as well as to that of *double* under-flooring.

Sec. 9. Common coarse lime and hair (such as generally serves for the pricking-up-coat in plastering) may be used for all the purposes *before or hereafter* mentioned; but it is considerably cheaper, and even much better, in all these cases to make use of *hay* instead of hair; in order to prevent the work from cracking. The *hay* ought to be chopped to about *three inches in length*; but no shorter.

One measure of common rough *sand*,‖ two measures of slacked lime, and three measures (but not less) of *chopped hay*, will prove (in general) a very good proportion, when sufficiently *beat up together* in the manner of common mortar. (The *hay* must be well dragged§ in this kind of rough plaster, and well intermixed with it; but the hay ought never to be put in until the *other two* ingredients are well beat up together with water.)

This rough plaster ought never to be made thin, for any of the work mentioned in this paper. (The *stiffer* it is, the better; provided it be not *too dry* to spread properly upon the laths.)

If the flooring boards are required to be laid very soon, a fourth or fifth part of *quick-lime (a)* in powder, very well mixed with this rough plaster, just before it is used, will cause it to dry very fast.

Sec. 10. When the rough plaster-work between the joists has got thoroughly *dry*, it ought to be observed, whether or not there be any *small cracks* in it; *particularly next to the joists.* If there are any, they ought to be washed over with a brush, wet with *mortar-wash*, (which will effectually close them; but there will never be any cracks at all, if the *chopped hay* and the *quick lime* be properly made use of.)

Sec. 11. The *mortar-wash* I make use of is merely this: About two measures of quick lime, and one measure of common sand, should be put into a pail; and should be very well stirred up with water, till the water grows very thick, so as to be almost of the consistency of a thin jelly. This wash, when used, will grow dry in a few minutes.

Sec. 12. *Before the flooring boards are laid*, a small quantity of very dry common *sand* should be strewed over the rough plaster-work; but *not* over the tops of the joists. The sand should be struck smooth with a hollow [or arched] rule, which ought to be about the length of the distance from joist to joist, and of about the eighth of an inch curvature; (which rule, passing over the sand, in the same direction with the joists, will cause the sand to lay *rather rounding* in the middle of the interval between each pair of joists.)

The following boards may then be laid and fastened down in the usual manner; but very particular attention must be paid to the rough plaster work, and to the boards being *most perfectly dry before the boards are laid*, for fear of the dry rot; (of which, however, there is no kind of danger, when this precaution is made use of.)

Sec. 13. The method of *under-flooring* I have also applied, with the utmost success to a *wooden stair-case.* It is made to follow the shape of the steps; but no sand is laid upon the plaster-work in this case.

II. Sec. 14. The method of *extra-lathing* may be applied, to *ceiling* joists, to slooping *roofs*, and to wooden *partitions.*—It is simply this. As the laths are going to be nailed on, some of the above mentioned rough plaster ought to be spread between these laths and the joists (or other timbers) against which these laths are to be nailed.—(The laths ought to be nailed very close to each other. When either of the ends of any of the laths laps over other laths, it ought to be attended to, that these ends be bedded sound in some of the same kind of rough plaster. This attention is equally necessary for the second layer of laths hereafter mentioned, Sec. 16.

Sec. 15. The *first* layer of laths ought to be covered with a pretty thick coat of the same rough plaster spoken of above, (Sec. 9.)—A *second* layer of laths ought then to be nailed on; each lath being, as it is put on, well spunged and bedded sound into the soft rough plaster. (For this reason no more of this first coat of rough plaster ought to be laid on at a time than what can be immediately followed with the second layer of laths.)

The laths of this second layer ought to be as close to each other as they can be, to allow of a proper clench of the rough plaster.

The laths of this second *(b)* layer may then be plastered over with a coat of the same kind of rough plaster; or it may be plastered over in the usual manner.

III. Sec. 16. The *third* method, which is that of *inter-securing* is very similar, in most respects, to that of *under-flooring*;—but *no sand* is afterwards to be laid upon it. Inter-securing is applicable to the same parts of a building as the method of *extra-lathing* just described; but it is not often necessary to be made use of.

Sec. 17. I have made a prodigious number of *experiments* upon every part of these different methods. I caused a wooden building to be constructed at Chevening, in Kent, in order to perform them in the most natural manner.—The methods of *ex-*

Of the notes which follow, those only marked (a) and (b) belong to the author of this memoir.

* *In the first of these cases the work is altogether* horizontal; *in the other two*, perpendicular inclined, *or sometimes* horizontal.

† *N. B. Through the whole of this memoir only* one *kind of plaster or mortar is mentioned, unless when otherwise expressed.*

‡ *As there is plaster* enough *provided for the purposes in question, more is not only useless, and a loss of plaster; but may prevent the boards lying truly on the joists, to say nothing of other inconveniences.*

‖ *It ought to be well-washed sand.*

§ *By this seems to be signified, that the pieces of hair are to be drawn straight.*

(a) I have practised this method in an extensive work with great advantage. In three weeks this rough plaster grows perfectly dry. The rough plaster, so made, may be applied at all times of the year with the greatest success. The easiest method, by much, of reducing the quick lime to powder is, by dropping a small quantity of water on the lime-stone, a little while before the powder is intended to be used: the lime will still retain a very sufficient degree of heat.

(b) If a third layer of laths be immediately nailed on, and be covered with a third coat of rough plaster, I then call the method treble lathing: but this method of treble lathing can almost in no case be required.

tra-lathing and *double under-flooring* were the ONLY ones made use of in that building.

On the 26th of September of last year (1777) I had the honor to repeat some of my experiments before the President and some of the Fellows of the Royal Society, the Lord Mayor and Aldermen of London, the Committee of City Lands, several of the foreign ministers, and a great number of other persons.

Sec. 18. The first experiment was to fill the *lower* room of the building (which room was about 26 feet long, by 16 wide) *full* of shavings and faggots, mixed with combustibles ; and to set them all on fire. The heat was so intense that the glass of the windows was melted like so much common sealing wax, and ran down in drops ; yet the flooring boards of that very room were not burnt through ; nor was one of the *side timbers*, *floor-joists*, or *ceiling joists*, damaged in the *smallest degree ;* and the persons who went into the room immediately over the room filled with fire, did not perceive any ill effects from it whatever ; (even the floor of that room being perfectly cool during that enormous conflagration immediately underneath.)†

Sec. 19. I then caused a kind of wooden *building* (of full 50 feet in length and of three stories high in the middle) to be erected, *quite close* to one end of the *secured* wooden house. I filled and covered this building, with above eleven hundred kiln fagots, and several loads of dry shavings; and I set this pile on fire.‡ The heighth of the flame was no less than 87 feet perpendicular, from the ground ; and the grass upon a bank, at 150 feet from the fire, was all *scorched*, yet the secured wooden building, quite contiguous to this vast heap of fire was not at all damaged, except some parts of the outer coat of plaster work. This experiment was intended to represent a *wooden town on fire ;* and to shew how effectually even a wooden building, if secured according to my new method, would stop the progress of the flames on that side, without any assistance from fire-engines, &c

Sec. 20. The last experiment I made *that day*, was the attempting to burn a *wooden stair-case*, secured according to my simple method of *under-flooring*. The under side of the stair-case was *extra lathed.*—Several very large kiln fagots were laid and kindled, under the stairs and upon the steps: This wooden stair case notwithstanding resisted (as if it had been of stone) all the attempts that were made to consume it. I have since made *five* other still stronger fires upon this same stair-case, without having repaired it ; having moreover *filled* the small space in which this stair-case, is, entirely with shavings and large fagots: but the stair case is however still standing and is but little damaged.

Sec. 21. In most houses it is necessary only to *secure the floors ;* and that according to the method of *single under-flooring* described above (in Sec. 2, 3, 4, and 5.)—The extra expense of it (all materials included) is only about *nine pence per square yard :* unless there should be particular difficulties attending the execution, (in which case it will vary a little.)—When *quick lime* is made use of, the expense is a trifle more.

The extra-expense of the method of extra-lathing is no more than *six pence per square yard* for the timber, side walls and partitions ; but for the *ceilings about nine pence per square yard.*—(No extra lathing is necessary for the generality of houses.)

Sec. 22. I purpose giving to the world before it is very long a detailed account of many other *experiments* I have made upon this subject, and of the various *advantages* arising from my method ; (with several particulars relative to the different parts of each of the methods above described ; and relative to their joint or separate application to different kinds of buildings, and to the different constituent parts of a house ;)—to which I shall add a full explanation of the *principles* upon which they are founded, and the reasons for their certain and surprising success.—In the mean time I have taken the liberty of troubling the Society with this short account.*

The paper of Lord Stanhope finishing here, it now belongs to us to authenticate his statements.

The *internal* evidence in their favor chiefly rests on the fact, that his account stands printed in the Transactions of the Royal Society of London, pursuant to a vote of its President and Council ; and that none of the numerous persons referred to as his witnesses, have chosen to contradict his statements during a long course of years. It is certainly no diminution of the force of this evidence that the experiments recorded are *in perfect consistence with sound theory ;* a truth, which will soon be demonstrated :

Our *external* evidence will be confined to three heads.—1st. As it was not on the above occasion, that Lord Stanhope made his first public exhibition on this subject ; by proving this, we shall have acquired a title to refer to two distinct sets of proofs of the general facts. The celebrated Earl of Chatham then, who was the father-in-law of Lord Stanhope, shall be our authority here ; for under date of Sept. 22, 1777, he writes thus to his then youthful son, the memorable Mr. Pitt. " On Friday, Lord Mahon's indefatigable spirit is to exhibit *another* incendium [or conflagration] to Lord Mayor, foreign ministers, and all lovers of philosophy and the good of society ; and means to illuminate the horizon with a little bonfire of 1200 fagots, and a *double* edifice. Had our dear friend [namely the author] been born sooner, Nero and the second Charles could never have amused themselves by reducing to ashes the two noblest cities in the world†."—2d. The plan of Lord Stanhope was not without other independent support ; for it had succeeded, *by the use of iron plates instead of plaster*, in the hands of Mr. David Hartley, (who signed the treaty between the U. S. and Great Britain in 1782.) This gentleman made a display of a double experiment on this subject in 1774, at Lord Despenser's in West Wycombe ; where the fire from two cart loads of dry fagots placed in a room 15 feet by 14, could not penetrate upwards through the ceiling ; nor could the fire from several fagots resting on the floor above, descend into the room below, though then vehemently heated ; the boards of the floor above being merely a little blackened by the trial. A second operation on a much larger scale took place before the King of England and a large concourse of spectators, on one of the commons near London, with an effect equally happy. Lord Stanhope and Mr. Hartley therefore may be considered as having performed corresponding sets of experiments ; of which each consequently *confirms the other.*—3d. The Austrian Ambassador at London, struck with these remarkable results, communicated the particulars to the Flemish government, then belonging to his master the Emperor of Germany ; when the well known Abbe Mann was quickly sent to England to examine into the particulars. He spoke favorably of both plans, and especially (it is believed) of Lord Stanhope's ; and their Royal and Imperial Academy of Sciences and Belles Lettres, in order to extend the knowledge of the facts, printed the Abbe's report separately from their Transactions, with a supplement by the Abbe, in which were included some *fresh experiments in confirmation*, by Col. Brequin. This then, in various ways, corroborates what was done in England.‡

To this amount of evidence there is nothing to oppose, but the fact, that the principles in question have not been adopted in general practice. But this is merely negative proof, and easily set aside.—1st. Few house-holders in old countries live in tenements built by *themselves*. 2d. If they did, many have neither money, nor strength of mind to act upon their own opinions ; and many are too willing to confide to their *good luck*, and to run hazards. 3d. Speculators will build whatever will sell, or let, and put them to least present cost. 4th. The convenience of insurance offices induces others besides speculators to run risks. 5th. Many improvements are made on the old methods of building ; but still they are far short of the improvements in question. 6th. Workmen probably have given little countenance to plans, which do not appear immediately serviceable to their particular interests. 7th. The knowledge of plans like these under discussion, has been gradually wearing out, till we have now nearly to begin the struggle on the subject over again.

Not only the recent fire at Bowdoin College, (but we add) the controversy at Boston respecting building in wood, and the propensity to this style of building in new settlements where wood abounds, (and these are now many over the globe) ; make this a favorable moment for offering a few additional remarks on the subject, to which we shall next proceed ; particularly, as much as may be said to abate the trouble and cost attending Lord Stanhope's plans, both in new and old buildings.

(To be continued.)

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† *It will be seen hereafter, that there was plastering upon more or less of this building on its outer side.*

‡ *It will appear that this building was destroyed, and intended to be destroyed, by being on fire on the outside as well as within ; it was not made fire-proof.*

* *N. B. It is not known that this promise was ever fulfilled by the author.*

† *For the authorities for these particulars, see* 1st. *B'p. Tomline's life of Mr. Pit :* 2a. *The English Annual Register ; particularly for July,* 1774: *3d. The Journaux des Scances for November* 11, 1777, *and May* 7, 1779, *and vol.* 2 *and* 3 *of the Memoirs of the above named Foreign Society, printed at Bruxelles.*

‡ *See the Remarks noticed in the Postscript.*

NOTICES OF THE

NORTH DEVON CATTLE.

Mr. BINGLEY, in his Memoirs of British Quadrupeds, gives the following account of this Breed of Cattle.

By all judges of Cattle, the Devonshire Breed is confessed to be one of the most beautiful, and at the same time one of the most valuable, which our Islands produce. They are of a large size, and of a red colour. The colour of the COWS varies from light blood-red to dark mahogany ; and the face, knees, and hocks, sometimes approach to black. The BULLS are nearly the same, but are also generally dark in the forequarters, and mottled on the sides and back.—The OXEN are often long in the Coat ; and a glossy mahogany colour, with waving curls, is held in great esteem.

Any white, except on the tip of the tail, is disliked by the Breeders, from its being supposed to shew a mongrel tendency. Round each eye there is a light ring. The horns taper to a point, and are of a light yellow colour. The

HEAD is small, and the Muzzle of a clear yellow.

These Cattle are fine in the bone, and clean in the neck. They are also wide across the hips and bosom. Their back is straight, and the tail is small and set on very high. They are thin skinned, and silky in the handling. The general height of the Bull is from 12 to 13 hands, of the Cow from 11 to 12, and of the Oxen from 14 to 15.

The Devonshire Cattle arrive at maturity sooner than most other Breeds, and the full grown Animals are so valuable, that few of the Calves are killed. For usefulness in Agricultural Labors, the Oxen are held in the highest estimation. They are well fitted for draught, both as to hardiness and activity.

The average quantity of Butter produced by the COWS is from seven to ten pounds per Week, though some have been known to yield as much as thirteen or fourteen.

Bingley at page 120 of Vol. 3, of Useful Knowledge says, those called the Devonshire Cattle are adjudged to be the best of any.

The following Account of the North Devons is extracted from page 239 of Recreations in Natural History. Published in 1815 by Sherwood, Neely & Jones.

This Breed bears a closer affinity to the wild race than any other. It is said to be found in the greatest purity, and of the best kind, in the neighbourhood of Barnstaple. The Horns are of a middle length, bending upwards. The colour varies from a light to a very deep red.—These Cattle are thin in the Face, fine in the Chops and Bone; clean in the Neck, and wide in the Hips. The Devonshire Breed is justly regarded as one of the handsomest, and at the same time most profitable which are reared in Britain.

They fatten early, and on the most valuable parts, and are admirably fitted for draught: and though small in point of size, they amply compensate for that defect by their hardiness and agility.

The DEVON OXEN are mostly yoked at two or three years old, and lightly worked. Their labour is increased at four: and from that period to six they are fully worked. Worked Oxen of this valuable Breed attain a larger size than those which are not worked, and at six years old they mostly finish their growth. In excellence of Beef, Mr. Bingley states, the Devonshire Oxen can scarcely be exceeded; and it is a remarkable circumstance, that they will bear driving to London, sometimes without the smallest waste, from a distance of considerably more than one hundred miles.

Their skin improves much in tanning, and their Tallow is of a peculiarly good quality.

As a permanent proof of the real value of this Race, it may be sufficient to remark, that it has generally commanded the best prices at Smithfield for a Century past.

Extract from an American Newspaper.

Baltimore (Maryland,) 11th June, 1817.

Arrived here, yesterday, in the Brig Margaretta, captain Gardner, from London, six beautiful young Cows, and one Bull, of the Devonshire Breed, together with some improved Implements of Husbandry, for Mr. Patterson and Mr. Caton, of this place, the whole being a present from the celebrated Mr. Coke, M. P. for Norfolk, the richest and most practical Farmer in England, who gives the following description of these Cattle.

"I venture to give it as my opinion, that we have no Cattle to be compared to them, in the united Kingdom, for Purity of Blood, for aptitude to feed, for hardiness, for work, and for the richness of their Milk, as I have repeatedly found by a variety of experiments upon my own Farms and elsewhere. That they may answer in America as well as they are now universally acknowledged to do in England, I most cordially hope, and my wishes will then be gratified."

An extract from the 549th Number of the Farmer's Journal, published by Evans & Ruffy, London.

"Smithfield Market, Monday 23d March 1818. The handsome and well fed North Devons have already got the name of *Norfolks.*"

Extract from the Farm Diary kept at Moor House, near Wakefield, Yorkshire.

Wednesday 6th August 1817. Arrived at Moor House, Four Yearling Quey Calves, and One Yearling Bull Calf, of the North Devon Breed, a present from Mr. Coke of Norfolk.

They were nine days on the Road from Holkham, being 172 miles. Although travelling at the rate of 19 miles a day for nine days together, they arrived very fresh, and not the least foot sore. They were greatly admired on the Road, and Johnstone the Drover was questioned the whole way where they came from and whither they were going.

Thursday 30th July, 1818. On my return from Norfolk I found that my North Devon Cows had borne the hot Summer and bare Pasture better than any other cattle in the field. They shewed this superiority in Norfolk. The fine herd, in Holkham park, found support and kept up their flesh on an apparently bare and burnt-up pasture.

My second visit into Norfolk convinced me that the Devons, which were first introduced by Mr. Coke, were becoming the favorite stock.

The Farmers said their pastures would carry more Devons than Suffolks, which had been hitherto their favorite Milch Cows; and the Farmer's Wives were now giving them the preference for the Dairy.

Mr. Bloomfield's Dairy of 20 Head (12 Cows and 8 Heifers) produced 130lb. of butter a week. One of these Cows had produced 13½lb. a week.

Mr. Coke's Bailiff had a Devon which produced 15lb. a week.

Mr. Oakes a Devon that produced 16¼lb. a week.

The Devon Oxen are decidedly the best draught Oxen in Britain. No other kind ought to be used for the plough.

Mr. Coke produced at the Sheepshearing in 1817, 3 Oxen which at 3 years old averaged 70 Stone, each, of 14lb. to the Stone. These Oxen had been worked so late as the preceding spring.

Those desirous of seeing this beautiful breed of Cattle in genuine purity, and in fine order, will find some elegant specimens of them at "Cold Spring," Mr. Patterson's country seat, near this city.—*Edit. Am. Farmer.*

ON INDIAN CORN.

(*Deferred by accident.*)

TO THE EDITOR OF THE AMERICAN FARMER.

Winchester, Frederick Cy. Va.

Dear Sir,—In several of the late numbers of the American Farmer, I have observed communications from a Maryland correspondent of yours, (who signs himself F,) on the culture of Maize. F appears to be a great advocate for the culture of this crop, and as an inducement to the agriculturist to devote more attention to it, states in his letter, which appeared in the Farmer of the 7th of December, that he had always observed that the corn planting farmers were the most money making farmers. Did this observation hold good, I must acknowledge it would be a powerful stimulus to a majority of them. Perhaps the peculiarity of the soil in the neighborhood of your correspondent, may render the corn crop there more profitable than any other; but this cannot be the case with the lands generally of your state. I would rather venture it as an opinion, that the lands of Pennsylvania, Maryland and Virginia are more congenial to the growth of small grain and the grasses, than any thing we have ever been in the habit of culturing, and from the little observation I have had, I have been induced to draw the inference, that so far from the corn farmers being the money making farmers, they have ever been the most unsuccessful ones, compelled to retain on these farms, a large force for the cultivation of this grain during the summer months—these must be supported the balance of the year almost as drones, and thus does the corn raised on many of our farms cost the cultivator more than the neighbourhood prices.

Certainly the grand desideratum of good farming must be to improve the fertility of our lands, making every thing comfortable about us, and providing for the education and support of a rising family. Means only then can be justifiable, that will promote these ends, and that the corn system so far from having this desirable effect, will retard the progress of the farmers, I have no hesitation in saying. To the general opinion of the profitableness of this crop, I firmly believe may be ascribed the poverty of our lands, and consequently of the cultivator, for with the enriching of the one goes that of the other; and if ever the theories of agricultural writers corresponded with the result of practice, they do when opposing the too general cultivation of this crop; enough, however, if we but record our own bad arrangement for the inspection of posterity, it may serve as a useful lesson.

Your correspondent in one of his communications, recommends the drill mode of planting—here I must again beg leave to differ with him. Among the advantages he enumerates, in favor of the drill system, the one which appears to have the most weight, is the convenience of cutting the wheat sown upon that ground, the width of the land being just sufficient to fill the arch of a circle described by the scythe of the cradler.—In the mode of cultivating corn and seeding the ground, which I would prefer, none of the objections exist, which he makes relative to the width of the wheat lands or unevenness of surface. I would recommend planting the corn in squares of four feet, from three to five grains in a hill, according to the nature of the soil and time of planting, but suffering only two in each hill to arrive at maturity, the rest being pulled out (provided there is no longer danger of cut-worms, frosts, crows, &c. &c.) when about six inches high. The grain should be planted in our county between the middle of April and first of May, so that the replanting would be completed by the middle of May, otherwise it would be destroyed by our early frost. Harrowing the field of corn with a common two horse harrow* before any ploughing is done, I think of infinite benefit.—Give it one ploughing then during the last of May, thin the corn the first of June, by which time the replanting will be sufficiently strong.—Give a cross ploughing of three furrows, and then throw aside the plough, the cultivator being much cheaper and more beneficial to the corn during the hot weather.

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* *It is quite unnecessary to alter the teeth of the harrow as is customary, provided the ground was in proper order before planting. A boy should follow the harrow with a rake made of five iron teeth, six inches long, deviating about one inch in their length from a straight line. This is an admirable implement for removing the clods and straightening the corn.*

In a future communication I will give a description of the cultivation, and say something about the mode. I would prefer putting in the wheat upon corn ground. You will be pleased to excuse the prolixity of the present, and believe me

Respectfully yours, &c.
WILLIAM M. BARTON.

J. S. Skinner, Esq.

On the Formation of Mortar.

TO THE EDITOR OF THE AMERICAN FARMER.

Sir,—Among the many valuable papers contained in your volumes, there are few which merit the attention of your readers more than the remarks of Professor Olmsted, on the subject of lime as a cement, published in your last number. Lime is an expensive article in a building of brick or stone; and the apprehension of this expense has frequently prevented or delayed many useful improvements in our towns, and in the country.—If it can be established that less than half the quantity usually employed will make a better and more durable mortar, it may be expected that the owners of lots and lands will be induced to increase the value of their property, by the erection of more permanent buildings.

Dr. James Anderson, of Edinburgh, several years ago published a treatise on this subject, with the same view which Mr. Olmsted appears to have entertained; and there is not perhaps any material difference in their opinions. What the true proportion of sand should be, it may be often difficult to ascertain; for this must depend upon the perfect or defective calcination of the stone, upon the purity or impurity of the lime, and upon the quality of the sand. But to show, for it will certainly show, that much less sand is generally used than ought to be applied, an extract from the Essay of Dr. Anderson is inclosed. It is not intended to recommend these proportions to your readers; but to confirm the confidence which they may be disposed to place in the observations of Mr. Olmsted. This treatise was put into his hands three or four years ago, when the subscriber was about to set up some pillars of brick for a hay-rick. He read some passages to the mason, and prevailed upon him to be governed by his directions, in the formation of mortar. The lime from its manner of slacking and falling, appeared to be good; and he is persuaded that at least twelve bushels of sand were added to every bushel of lime. The mortar so formed was used upon the pillars, and all the interstices were filled up with it. The work appears to be excellent.

A SUBSCRIBER.

Talbot County, Md. 2d April, 1822.

Extract from the Essay of James Anderson, L. L. D. F. R. S. &c.

"The best modern mortar I ever saw, was made of lime that I myself had analyzed, and found it contained eleven parts of sand to one of lime.—To this there was added between twice and thrice its whole bulk of sand *by measure;* which may be allowed to have been at least three times its quantity *by weight.*

"Now supposing that every particle of that lime had been so perfectly calcined as to be in a caustic state, there could not be less than forty-seven parts of sand to one of lime. The reader may allow what he pleases for the uncaustic part of the lime, and make his calculation accordingly. But it is hardly possible to suppose, that above one hundredth part of this mass, independent of the water, consisted of pure caustic calcareous earth.

"But whatever was the exact proportion of caustic lime, the mortar was made of these materials in proportions expressed, and was employed for pinning the outside joints of the stone-walls of a house situated in a tempestuous climate, and exposed to every blast. It is now about fourteen years since it was finished, and I do not believe there has fallen to the ground, in all that time, one pound weight of the mortar.[*]

"Had this mortar been employed in building a thick wall, where it would have been suffered to dry slow enough, there seems to be little reason to doubt but it would in time have become as firm as the stones of the wall itself.

"From these considerations we may clearly see, that it is impossible to prescribe any determinate proportion of sand to lime, as that must vary according to the nature of the lime, and other incidental circumstances, which it would be tiresome to enumerate, and which would form an infinity of exceptions to any generul rule.

"But it would seem, we might safely infer, that the moderns in general, rather err in giving too little sand, than in giving too much.

"It deserves, however, to be remarked, that the sand, when naturally in the lime-stone, is more intimately blended with the lime, than can possibly be ever effected by any mechanical operation—so that it would be in vain to hope to make good mortar artificially from pure lime, with such a small proportion of caustic calcareous matter, as may sometimes be effected when the lime naturally contains a very large proportion of sand. But there seems to be no doubt that if a much larger proportion of sand were employed, and if that were more carefully blended and expeditiously worked than is common, the mortar would be much more perfect than usual in modern times.

"This I have tried experimentally, with the desired success."

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[*] *In a note to a second edition of this work is the following addition:—" After seven years longer trial, the mortar still proves good and firm, and exhibits no appearance of ever falling."*

FOR THE AMERICAN FARMER.

On Ashes & Plaster of Paris,

WHEN UNITED.

Some weeks ago one of your correspondents published an article attributing wonderful effects to these manures when used in combination, and having myself acquired the practice in Lancaster County, of mixing them for the purpose of conveniently damping the plaster, that no part of it might blow off while sowing, and being desirous to ascertain whether this was the *sole* object among the Dutch for mixing, I instituted some experiments to determine whether they, or either of them, acquired additional vigor from being united; the result of which experiments I stated in a number of the Farmer, subsequent to, and in notice of the article above alluded to. My object then was not the pleasure of objecting or finding fault, for this unprofitable office affords me no pleasure; but it was purely to correct what I considered an error, to prevent disappointment, and to aid in settling and fixing some definitive rational principles in our profession. For the same reasons, I now take the liberty of suggesting that a writer signed G. W. in your paper of the 22d inst. (whether the same or another, I do not recollect) while treating on the same subject, has fallen into two errors, which it may be useful to correct at once.

In the first place, he speaks of plaster of paris, as being able to produce the more immediate fermentation and putrefaction of the vegetable matter in his soil. This theory of the modus operandi of plaster, Sir H. Davy's experiments has completely *exploded*, though Davy's own theory does not seem to receive general credence. In another place, your correspondent speaks of the good practice of Dr. Warfield "in leaving his ashes during the winter in the rains, in order that by the spring they may be *sufficiently slack*." I would respectfully suggest, that whilst the Doctor was communicating his valuable secret, he was at the same time propagating a very great error. For to preserve ashes in their greatest and most efficient strength to apply as manure; they should not be wet until they are laid *upon* the ground. Every rain whilst they are on the dung-hill, subtracts from their value, while it is not added to the field. They may be washed by the rain until all their constituent matter may be dissolved except the silicious. If the Doctor was afraid that the ashes would "burn" the corn, he might have used a lesser quantity, or placed them round the top of the hill. I have often used a shovel full in this way, of the Doctor's "slack" ashes, and *never had* the corn to burn from that cause.

ENQUIRER.

TO THE EDITOR OF THE AMERICAN FARMER.

I will state to you an experiment made on a small piece of ground, which goes to establish the fact, that plastering clover *largely* at the time of turning it down and preparing it for a wheat crop, is by far the most advantageous to the crop, and much preferable to turning in the clover, in the usual way and plastering on the surface, when the wheat is sowed, in the spring of the year. As I have stated in my last communication, the action of the plaster (thus excluded from atmospheric air) upon the clover, covered over, is instantaneous, and the putridity is so certain as to cause considerable gas, which in its passage through the clod, impregnates it with all its manuring qualities, and the root of the plant shoots down and feeds on a bed of manure, &c. About four or five years ago I purchased a small slip of land of Mr. William Patterson in Baltimore county, a part of which was old field, used by him only as a sheep pasture, because it laid so far from the main body of his land that it was no object with him to better its condition. This ground was originally good and of a kind soil, such as is understood to be real plaster land, but from constant cultivation for many years (probably before he got it) had become quite exhausted, and produced what is commonly called poverty grass, so called from its being the meanest of all grasses, having very little vegetable substance in it, and is generally found on soils which have been impoverished by constant cultivation in the old fashioned way.

Three acres of this ground I enclosed in a field adjoining, and put it in oats. In the fall of the year I gave it a good deep ploughing, first sowing two bushels of plaster to the acre on the poverty grass, which was turned under as soon in the spring as possible. I again ploughed it and harrowed it down; I then sowed it in oats, and with two Bushels of plaster to the acre, and harrowed the oats and plaster in together, and sowed clover seed. I had as may be expected, but a tolerable crop of oats from such poor ground; the clover however took finely and flourished well during summer, and by the fall the ground had a good covering, which rotted on the ground during winter; (I permitted nothing to graze on it during the summer or fall.) In the spring I again plastered it, with the same quantity, making in all six bushels of plaster to the acre, in that short time Wanting grass for my stock, I cut the next crop, which yielded more than a ton to the acre—the second crop was left on the gronnd as before. The following spring, I again plastered it, and the clover was very good—this crop I turned down *en mass* in the fall, first putting about two bushels of plaster to the acre, at the time of ploughing under—it was then harrowed the same way it was ploughed, and sowed with wheat and harrowed in, and if the fly had not taken it should have made a good crop of wheat. Last fall, in consequence of a large quantity of blue grass appearing, I ploughed it down, intending to put in corn this spring, (first sowing on the stubble and grass about two bushels of plaster to the acre) and if it is a good season, expect to make 10 barrels of corn to the acre, with the assistance of plaster and ashes in the hill. I can aver that this spot of ground has had no other manure except clover and plaster during the time. This experiment has convinced me that real plaster land, although worn out, may be reclaimed in a very short time, by this simple process, and made to produce better than when in its original state ; in fact, I am convinced by turning in clover and plaster in this way, you may in a short time, make the land too rich for wheat, and have a soil as deep as you can plough it. To effect this in a short time, you must be careful to suffer no stock of any kind to range over or graze on it—it is true that this mode of improvement requires patience, money, labor, and time, but in the end, when your soil is made, it will with care and attention, cost but little to keep it in good plight, and your crops in that state, will amply remunerate you. It is the wish of the writer to impress on the minds of every farmer, to plough his lands deep in the fall of the year, as the most certain method to improve waste grounds, and is the best preparation he can give it for a summer's crop ; the ground being in a loose broken state, absorbs during winter, all the rains and snows, which is of itself, *in my mind*, equal to a slight coat of manure. G. W.

* * *

FOR THE AMERICAN FARMER.

Mr. Skinner: As millet had been highly recommended in your paper, I determined to sow a small quantity last season, and procured an half bushel of seed, the latter part of may. I sowed twelve quarts on the fifth of June, on about one acre ; the latter end of August I mowed it, and let it lay a day or two without spreading. When it was sufficiently cured for hay, I had it drawn to the treading floor, and trodden with horses. I had ten bushels of seed, and four large loads of my ox cart of hay, and although it was *not better than timothy*, it was eaten heartily by my horses and cows.

I was much pleased with it during its progress, it came up quickly, grew rapidly, began to head in July, and was beautiful to view ; I think it would be profitable as a green crop for soiling.—It was sown too late I think, and had to contend with the crab grass, but it soon overpowered it, where it was soon thick enough. After the millet was taken off, *the ground ploughed very mellow.*

I think this grass, or grain, or whatever it ought to be called, has not been properly estimated by writers who have mentioned it, for if my small experiment is a just criterion to fix its value, I regret very much that I have not had an opportunity of proving it ; before your publications, all the books I have read on the subject, give it an ordinary character. I shall sow several bushels this season, at different times, and will give you the result in the fall. I would advise every farmer to sow a small quantity, and judge for himself, of its value. Mine is a small yellow seed not much larger than cabbage seed.

I think it requires good ground, but grass, or grain of any kind, is not very productive on a poor soil. A.

We should be glad that writers about millet would always mention which species of millet they speak of.—*Edit. Am. Farmer.*

* * *

The Carolina Plough.

TO THE EDITOR OF THE AMERICAN FARMER.

Raleigh, *March* 22, 1822.

Dear Sir,—I send you a draft of a newly invented or improved plough, which I am satisfied is in many respects, superior to any that I have had an opportunity of seeing used ; having had one made about a month since, I found that a single horse would break up an acre of what we call "old field" in less time and more easily, in one of these, than two would do, in the "New-England Coulter Plough," which I had before used. On ascertaining this fact, although in a season of hurry, I immediately set about working up my old ploughs into new, and find that in so doing, I have gained at least one half in time. Besides my old ploughs were so heavy as to require a man to manage them, while these are easily handled by a boy of twelve years old.

There are objections to the use of the Freeborn Plough in the south, not existing perhaps at the north, which I think are in this improvement generally obviated. It is very light, strong, easily made or repaired by a common smith, and can be afforded complete, at five dollars each.

Should you think the improvement worthy of a plate, you are at liberty to give it a place in your useful paper.

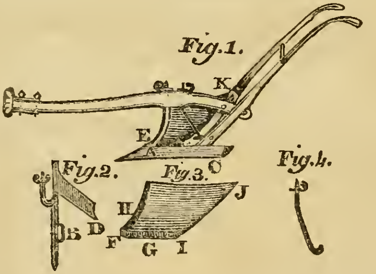

Fig. 1. Represents the plough entire.

Fig. 2. Gives nearly a top view of the land side, wing and front bar.

Fig. 3. Presents the back view of the sheet iron mould.

Fig. 4. A stay rod.

The land side is made of a bar of iron two inches wide, and sixteen inches long ; this is brought to a point at one end ; the front bar welded on at A, fig. 1 ; the loop B, fig. 2, is made of iron 1½ inches wide, and welded to the upper edge of the land side, leaving half an inch for the stay rod to pass through and hook underneath it.

The wing is a piece of three inch bar, made thin at both edges, hollowed to resemble the section of a cylinder, with a small hole at D, fig. 2, and welded upon the land side, leaving a small offset for the mould at E, fig. 1.

Fig. 3. Is the mould made of thick sheet iron ; the corner at F is cut out, so as to admit its lower edge G, beneath the upper edge of the wing while the end H rests on the front bar to which it is pressed, and around which it is bent. Small holes are made, one at I, corresponding with D, fig. 2, another at J, by which it is fastened with a small nail to the handle.

Fig. 4. Is a small rod passing from C, fig. 1, through the loop B, fig. 2, to which it hooks, also through the foot of the left handle and beam, and is strained by a screw at top. The right handle should be bent at K, fig. 1, to spread the mould, and curve the upper extremity of it a little forward. A little of this handle should be cut out below, to give the mould a slight concavity.

When together, the beam rests on the mould, keeping it firm in its place, a wrought nail is put through the wing, mould, and lower end of the right handle, and turned just enough to keep it from falling out, which is sufficiently strong and more convenient than a screw bolt.

I will here acknowledge that in forming the mould, I am indebted in a great measure, to the remarks of Mr. Gideon Davis, on the horse and plough, in the 29th No. of the American Farmer, In the principle of which I most fully acquiese.

I am, respectfully sir,
Your constant reader,
J. H. HASSAN.

MR. JOHN S. SKINNER.

* * *

From the London Farmer's Journal.

TURNPIKE ROADS.

It appears that from the Report from the Select Committee appointed to consider the Acts now in force regarding turnpike Roads and Highways, just printed, that the total amount of money levied under the authority of Turnpike Acts, is—

In England	£970,618
Wales	37,672
Scotland	129,635
	£1,137,925

In Lanarkshire there are 371 miles of turnpike roads : annual income, £27,744 ; income per mile, £74 ; amount of debt, £269,260 ; debt per mile, £725 ; annual expenditure, £25,579 ; expenditure per mile, £68 ; excess of income, £2165 ; interest of debt, £21,845.

The annual income of all the turnpike roads in Scotland is £129,635 ; the total debt, £1,124,273 ; the annual expenditure, £152,820 ; the excess of expenditure, £6,671 ; the interest, £140,826 ; and the total number of miles, turnpike roads in Scotland, completed and not completed 3611.

The following roads in England afford a remarkable contrast : Gloucestershire—897 miles road : annual income, £51,558 ; income per mile, £57 ; amount of debt, £212,509 ; debt per mile, £236 annual expenditure, £31,494 ; expenditure per mile, £35 ; excess of income, £19,734 ; interest of debt, £4346.

Middlesex, which we believe includes London and its vicinity, north of the Thames 157 miles road : annual income, £95,545 ; income per mile, £608 ; amount of debt ; £185,475 ; debt per mile, £118 ; annual expenditure, £66,050 ; expenditure per mile £548 ; excess of income, £9495 ; interest of debt, £1802.

* * *

WINCHESTER, Va. April 3, 1822.

MR. SKINNER,—Perceiving in your last paper an advertisement of Mr. Bolton, of New York, announcing his invention of a new Clover Mill, with an invitation to gentlemen to purchase district and state rights—it may not be unimportant to the farmers of the Southern States to know that Mr. Joseph C. Baldwin, of this town, has invented a machine for a similar purpose.

Editor's Correspondence.

ANIMAL COTTON.

BLADENSBURGH, October 19, 1821.

Sir: I send you a curious bunch of cotton, found growing on a vine, in my overseer's garden, the worm which appears to have spun it, is en closed in one of the bunches; perhaps, some of your Botanical friends, may be able to designate, what class, or genus, it belongs to,

Respectfully, sir,
Your's, &c. &c.
A CONSTANT READER.

MR. SKINNER.

The above was sent with the cotton, to Reuben Haines, with a request that he would submit it to Mr. Say.

MR. R. HAINES: The cottonlike substance received from Mr. Skinner, which you submitted to my examination, is of a beautiful whiteness and remarkable tenuity of fibre.

I at first supposed it to be the production of an extraordinary assemblage of a species of insect of the genus *Psylla* of Geoffroy (Chermes Lin.), the cottonlike vesture of which, it very much resembles.

On separating it, however, to discover what Mr. Skinner's anonymous correspondent, regards as "*the worm which appears to have spun it,*" I observed the mass of small coccoons, closely compacted together, arranged somewhat symmetrically, and intimately adhering in every part of this exterior surface to the cotton or silky matter. I had now no doubt as to the fabricators of the mass in question, which are certainly no other than the imperfect and numerous progeny of a species of the genus *Ichneumon* of Linné; which had been deposited by the parent, within the body of a caterpillar, and which having attained their full growth had pierced the skin of the catterpillar, and formed this delicate covering to protect them in that inert state which precedes their ultimate form.

This species, so truly remarkable for the great abundance of the silky secretion with which its coccoons are enveloped, may at a future day supply a particular and costly manufacture, notwithstanding the difficulties which would attend its artificial propagation.

For an account of a somewhat similar insect, and of which the manners and habits resemble those in question, I must refer you to "*A memoir on animal cotton, or the insect fly-carrier,*" by Mr. Lozieres, in the 5th Vol. Amer. Philos. Trans. p. 150.

Your's respectfully,
THOMAS SAY.

INDIGESTION.

RALEIGH, August 5, 1821.

Dear Sir,

I wrote the essays you speak of at the request of the editor of the Star. He wanted only an account of the rye coffee, which my family had been sometime in the habit of using, and I thought best to conjoin with such an account some observations on the diseases produced by coffee. I fear my remarks will be found too brief and too general to offer you the satisfaction you may have been led to expect.

I have had much experience of the diseases of Indigestion. No remedy for it is equal to the producing an eruption on the back; over and between the scapula. Flannel, aud a strong servant with hard nails raking the back night and morning, will commonly effect this. It may be promoted, (though other means are seldom required,) by tartarised antimony in the form of lotion or ointment. A pimple with attention may be made a perpetual sore. But a disease that requires much sleep and regular hours, had better attend any one than an Editor and Post Master.

Of the pills mentioned in my essay,* I have said too little, they cannot be too much extolled. They should be taken regularly to guard against constipation if it exists, and to correct acidity and give tone to the stomach where it does not.—Beware of Chalybeates.

Rice and milk is the best diet, for dyspeptics, maugre all that chymists and physicians will tell you of its disposition to acidity, and that an acid stomach must be met by athalescent food.

I am glad to hear that you intend to publish my essay in the "Farmer," I hope it may be useful to the bodies and the purses of some of your readers.

With my best wishes, for your better health, I am much and respectfully yours.

CALVIN JONES.

P. S. I have just learned that my essay will in two or three days appear in a pamphlet, in which form I will send it you. Do you drink coffee?—Do you wear flannel? You need not tell me until you return from Saratoga, when I shall be very glad to hear of your health, as I suppose you have hardly leisure at this time, to answer idle enquiries, and I would not undertake to prescribe for a man living in a town that has a Potter and a Pattison in it.

I would recommend to your notice the last part of an article on Veterinery Surgery in the last number of the New England Journal of Medicine and Surgery.†

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* *See American Farmer, last volume.*

† *This is one of the few periodical works which we do not get in exchange for the Farmer.*

THE FARMER.

BALTIMORE, FRIDAY, APRIL 19, 1822.

☞ Since the establishment of this paper, we have never known so few discontinuances at the end of the volume. Those who decline taking it, are exceeded by the number of new subscribers to the fourth volume; and many carry back their patronage to the commencement of the work. Although we have caused to be printed a third edition of the two first volumes, we foresee the time when we shall soon be unable to supply the demand for them. ☞ Those therefore who fail to pay for this paper, take from the Editor the amount *in cash*, for if we had their papers unsoiled, they would be *equivalent to so much money.*

☞ We shall feel much indebted to any gentleman in New England, for a dissertation on the culture, gathering, curing, &c. &c. of HOPS.—We ask it from New England, because we believe the subject to be better understood there than in any other part of this country, and the liberality hitherto exhibited by agriculturists in that quarter, gives us reason to believe that we shall not, in this instance, ask in vain. The maxim of one of the best and most useful citizens of Massachusetts should be the motto of all Farmers, to wit, to "tell you all I know, and beat you afterwards if I can."

☞ So many varieties of seed and grain, are sent to the office of the American Farmer for distribution, that it would be impossible to make it, without appropriating the services of one person exclusively to that object; we shall hereafter publish, from time to time, a register of the articles thus received, with a brief account of them, and the names of those by whom they are presented; yesterday a gentleman left, without his name, in the Editor's absence, some "Spanish peas," said to be very rich and fine; and to day some wheat was presented "from Palermo in Sicily," by Messrs. Hall & Marean, merchants of high repute, to whom we were not long since indebted, for a rare and valuable collection of vegetable and grass seeds from Holland.

PRICES CURRENT—CORRECTED WEEKLY.

Flour from the wagons, superfine, $6 31—Wharf do. $6 per bbl.—Wheat, white, 74 cts.—Red, 71 to 72—white, and yellow Corn, 131 to 134—Rye, 70 to 75—Oats, 33 to 35—Whiskey, 31 cts.—Wool, 30 to 50—Beans, 130 cts. per bushel, wholesale—*Grass Seeds*, Clover, $8—Timothy, $5—Orchard, 3½—Herds, 3 per bushel, at retail—Salt, coarse, 54 to 65 cents—Liverpool ground, 50—do. fine, 40 to 44 per bushel—Plaster of Paris, ground, $7 per ton or 125 cents per bbl.—Mess Beef, $11—do Pork, 13—Herrings, 2½ to 2¾—Shad, 5½ to 6 per bbl.—Codfish, 3 to 3½ cts.—Hams, 11—Cheese, 11—Butter, 20 to 25 per lb.—Eggs, 10 to 12 cents per doz.—Cotton, Georgia Upland, 15 to 17 cents per lb.—Louisiana or Alabama 18 to 20—Feathers, 40 cts. per lb.—Tar, 175 cts.—Turpentine, 175 to 200—Rosin, 150 per bbl.—Spirits of Turpentine, 45 to 50 cents—Varnish, 30—Linseed Oil, 75 to 80 per gallon—TOBACCO, fine yellow, none—good do. $20—fine spangled, $16 to 18—fired, fine red, $12 to 16—good, do. $8 to 12—Patuxent, fine red, $12 to 14—good do. $6 to 10—common, do. $3 to 5—Eastern Shore, $2½ to 4—seconds, $1 50 to $6.

FOR SALE

At Brooklandwood, the seat of Mr, Richard Caton, distant nine miles from Baltimore, on the Fall's Turnpike Road, the following valuable stock, viz:

A stud HORSE, not four years old by the celebrated horse Top Gallant, out of a full blooded mare whose dam was imported.

A stud HORSE not four years old, by Top Gallant out of a Virginia mare three quarters blooded. The above horses, are dark bays, upwards of fifteen hands high, and will be sixteen hands, they are an exact match and have superior figure and action; the price of each horse is $300. It is well known that the blood of Top Gallant, is remarkable for making fine saddle horses.

Two BULLS, one of one year, and one of two years old, out of an imported Alderny cow, by an imported Devon bull, the price of each is eighty dollars.

Three half blooded Devon Bulls, out of very fine cows, price $30 a piece, they bear all the marks of the full blood.

Bull CALVES, two months old, of half and three quarters Blood, of the Devons, will be sold if previously engaged, at twenty dollars and thirty dollars per head, having all the characteristic points of full bloods.

In the year 1823 full blooded Bull CALVES of the Devon breed, will be delivered at one hundred dollars each if applied for, to

I. G. WAMSLEY,
Manager.
Brooklandwood, 12th April 1822.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, at the North West corner of Market and Belvidere-streets, Baltimore, *where every description of Book and Job printing is executed with neatness and despatch*—Orders from a distance for Binding, with proper directions, promptly attended to.

AGRICULTURE.

The Cottager's Manual,

FOR THE MANAGEMENT OF BEES THROUGHOUT EVERY MONTH OF THE YEAR.

To the president, vice presidents, the treasurer, and members of the British Apiarian Society, who, by their laudable endeavors, have encouraged the culture of the Bee, amongst the cottagers, this manual is dedicated, with feelings of the most profound respect, by their secretary.

[CONCLUDED.]

SEPTEMBER.

To those persons who follow the humane system of depriving their hives of part of their store, this month is one of the most busy and important of the whole year. The instructions for depriving the hives have been so amply given in the pamphlet published for the use of those who adopt the Huish hive, that a mere repetition must appear prolix and extraneous;—it should, however, be the study of the humane apiarian to ascertain, this month, the exact time when any of his neighbors intend to suffocate their Bees, and as the Bees themselves cannot be of any use to the suffocator, either to beg or *purchase* them. It may appear singular to recommend, or even to mention the *purchase* of that which is in itself, to the proprietor, of no use, consequently no pecuniary value can be attached to it, but such is the perverseness of human nature, that the commodity which, comparatively speaking, is of no value, becomes immediately invested with it, at the instant that it is sought for by another. I have had too many instances of the truth of this remark to doubt it for a moment, and particularly in regard to the Bees of a hive intended for suffocation. An increase of numbers is in most cases highly advantageous to a hive, and I may say indeed in *every* case, where the proprietor is convinced that there is a sufficiency of food in the hive for the support of the united population, or who may be willing, in case of a deficiency, to support them by feeding. With this view, I have always solicited the cottager, bent on the suffocating system, to allow me to take his Bees from the hive, thereby enjoying the double satisfaction of saving the lives of the Bees, and adding to the strength of my own hives; but although the very hole be dug, in which the poor insects are to be buried, and the match lighted which is to consign them to instant death, the interested and avaricious individual immediately discovers an intrinsic value in the Bees, and demands an exorbitant price for that, which in a few moments cannot possibly possess any value. I am well aware that upon the true principles of political economy, the proposition which I have just advanced is not tenable, and that an equivalent is always due for that which possesses any value whatever, but in this case, the value of the Bees is as nothing in the eye of him who is going to suffocate them, but the very request for them sets the most powerful principle of human nature in action, and the cottager, looking anxiously in your face, immediately asks, *what will you give me for them?* It is in vain to argue with him, that as the Bees are of no value to him, he ought to give them,—he archly answers, they must be of value to you, or you would not beg them. Now this certainly cannot be controverted by any logical deduction, and I am not able to quote many instances in which I could obtain the Bees as a gift; but I would advise the considerate apiarian rather to give a trifle than to lose the golden opportunity of enriching his own hives, by such a valuable addition to their numbers. The junction of two hives is by no means attended with that difficulty which many persons attach to it, nor is it attended with those appalling circumstances as to deter even the most timid from undertaking it. It is true, that it is only the experienced and persevering apiarian who will give himself the trouble of searching for the Queen Bee, and thereby prevent a positive degree of quarrelling which must necessarily take place in a hive, before one of the rival Queens is either expelled or killed, but even allowing that the latter operation is left for the Bees to perform, which, however, I would strongly recommend every apiarian to perform for them, he will, nevertheless, find his account in the number of the Bees which will be left, and the advantages of which will manifest themselves in the early part of the ensuing spring, by the forward state of the brood, and consequently by early swarms, which in all cases ought to be encouraged.

This is an excellent season for the establishment of an apiary; the goodness or badness of a hive is now easily determined, and the weight is the best criterion by which the purchaser can direct himself; a considerable distinction must however be made between a swarm and a stock hive, the weight of the former is formed by honey, wax and the Bees; in the latter, however, is included Bee bread, the heaviest substance in a hive, and many persons who take the weight of a hive as the criterion of its goodness, find themselves miserably deceived when they come to inspect it, for although, in order to establish and confirm the prosperity and health of a hive, a particular portion of Bee-bread is indispensible, yet in the old hives there is generally such a superfluity of it, as to render it actually prejudicial to the Bees. There is not a more dangerous thing to the health of the Bee, than infected Bee-bread—it is the parent of the most severe disorder with which they are afflicted, namely, the dysentery, and which annually destroys a considerable number of hives. A swarm is always to be preferred to an old stock, provided it be a *first* swarm, and I cannot suffer this opportunity to escape, of exposing a gross imposition, which is too often practised in the purchase of swarms.—A gentleman sends his hives to a cottager to have the *first* swarms put into them, and for which he agrees to pay the usual price of first swarms. Not being himself present at the swarming of the Bees, he relies solely upon the honor of the cottager to send him the first swarm--but honor and interest seldom coalesce, the cottager waits until the second swarm comes off, which is seldom longer than five days, and sometimes not two—he puts the second swarm in the gentleman's hive, hastens with it to the appointed place, and with the knowledge that there are few gentleman who are able, or even disposed, to detect the imposition, he receives the stipulated price of the first swarm, and secretly rejoicing over the success of his trick, he congratulates himself on the possession of a first swarm, and the sale of his second.—Should, however, the swarm have been put into a Huish hive, the imposition may be discovered on the following day, for it is the most singular nature of a second swarm, to begin its combs at the side of the hive, whereas a first swarm begins them in the middle.*

Particular attention must be paid to those hives which have not killed their drones. In this interesting part of apiarian science, some very important instructions are necessary. The drone has been stigmatized with being a useless member of the community, whereas, during his short existence, he is the very life and soul of the hive, and having performed the offices allotted to him by nature, he is *expelled*, or killed; a most ungracious return indeed! but from some late remarks I am inclined to believe that the drone is not always killed by the common Bee, but that he is expelled the hive, and becoming a vagabond, dies of hunger. I am borne out in this remark by the circumstance, that the attentive observer will at the period of the massacre of the drones, frequently perceive the collected body of the drones clustering at the entrance of the hive, and on the following day not one is to be seen.—Were they killed, their bodies would be perceptible on the ground, but not one presents itself, and therefore a particular degree of judgment is necessary to determine whether the drones are no longer in the hive, for the proprietor may say, "I have not seen the drones killed," and he may thence conclude that they are still in the hive, whereas, by a simultaneous motion, they may have taken their departure, and kindly saved the Bees the tronble of killing them. It must, however, in order to determine the health of a hive, be positively ascertained whether the drones are, or are not in it, and this can only be done in an interior examination, or by carefully watching during a fine day at the entrance, to observe if any drones present themselves, and this watching need only be adopted from about eleven o'clock to twelve.—Should any drones present themselves this month, the proprietor may assure himself that some radical defect exists in the hive, and his management must be regulated according to the circumstances which present themselves, for it is impossible to lay down a certain rule of management for the infinite variety of cases which may present themselves, and herein lies the skill of the experienced apiarian, to adjust his remedy to the case which presents itself, and to make himself thoroughly acquainted with the symptoms by which that case is distinguished.

I am induced, from repeated experiments, to give it as my decided opinion, that the Bees ought to be assisted in the murder of the drones. Were the slightest doubt existing that a *single* drone were left in the hive during the winter, the indiscriminate murder would be extremely injudicious, but notwithstanding HUBER declares that a few favorite drones are preserved to amuse the Queen during the solitary months of winter, (and certainly I do not see why the Queen Bee should not have her POTEMKIN's and her LANSKOI's as well as the Empress of Russia, or any other Empress or Queen whatever) yet after the most minute and frequent examination of a hive during the winter, I have never been able to discover a single drone. Therefore, the sooner the drones are dispatched, when the Bees have pointed out the proper time, the more time is allowed for the Bees to attend to the other offices of the hive. A little spatula, or flat piece of wood, will serve the purpose of killing the drones, which may be easily done as they present themselves at the entrance of the hive or on the resting place before it.

The proprietor having deprived his hives of their superfluous store, should now fasten down his hives for the winter, in order to prevent the ingress of those insects and vermin which have no objection to the warmth of a hive during the winter.

To those who keep their Bees in the common hive, I would recommend a complete examination of the interior, and having ascertained the health of the hive, to cleanse the pedestal, sprinkling a little salt upon it, this will tend considerably to the health of the Bees: contract the entrance, and plaster the hive to the stool.

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* *As all the motions of this sagacious insect appear to be directed according to some positive rule, or preconcerted design, I have frequently attempted to ascertain the cause of this singular propensity of the second swarm, but I can attribute no other reason for it, than being aware of their own weakness, they are conscious that they cannot fill up the whole vacuum of the hive, and therefore, for the purpose of congregation they adopt the smallest possible space in which their labors can be carried on.*

OCTOBER.

One of the chief occupations during this month, is the feeding of the weak hives. Persons who keep Bees appear, in general, not to be aware of the great advantange which is derived from a liberal system of feeding, and it may be affirmed without fear of refutation, that there is not any department in the whole range of the apiary, in which keepers of Bees in general are so wofully ignorant; the cottager goes to his elder tree, cuts off a branch, and having scooped out the pith of it, fills it with raw sugar, and inserts it at the entrance of the hive. This system is adopted at all seasons, and in all weathers—the Bees are accidentally observed eating the sugar, in the same manner as a hungry man is not very choice of the victuals which are set before him, and the cottager immediately concludes that he has fed his Bees; and should they survive the winter, he sagaciously concludes that it was the raw sugar that saved his Bees—a liberal supply of boiled ale and sugar, will save many a hive, that would inevitably die upon the mere food of raw sugar; and in this month, whatever hives appear weak, let them be bountifully fed—choose a fine day for the purpose, when the Bees are on the wing—place some plates full of the syrup before the hives, and the Bees will soon regale upon it—they will carry it to their cells, and in the winter months it will supply the place of honey.

The hives, this month, should be all weighed, and making due allowance for the weight of the hive and the Bees, an estimate can easily be made of the actual quantity of honey. This should always be the foundation and rule of the system of feeding, and the judicious manager will always make an allowance for the openness or rigor of the season. In an open season the consumption of food is greater, and therefore a more liberal supply ought to be given, but it is at all times better to give an abundance at once, than to administer it by driblets.

The covering of the hives must now be particularly attended to, the common straw covering is the best, provided, as is generally the case, it be not made to reach the ground, by which the insects and mice are able to ascend into the hive. The covering should be cut close to the stool on which the hive stands, and there should not be any object behind, which could serve as a conductor to the insects. Cleanliness is one of the fundamental pillars of apiarian science, and although some cottagers conceive that a pigstye is an excellent place for Bees, from an erroneous notion that they are particularly partial to the balsamic odour of a piggery, yet the second year will convince them of their error, if conviction on particular points can be ever imparted to them—for I never knew an apiary prosper which was placed over a pigstye; on the contrary, the second or third year, at furthest, the Bees dwindled away, or forsook the hive.

The entrance must now be contracted, so as to admit only one Bee at once. All dampness should be carefully removed from the hives—it is highly injurious, and will ultimately prove their ruin.

NOVEMBER.

The chief occupation of the apiarian this month is the visitation of his hives. In a healthy hive, an evident decrease will be manifest in the consumption of the hive; and due care should be taken that all chance of death by famine should be averted. It is the principle of many persons, but it is founded on erroneous ideas, that Bees ought to be kept warm during the winter; and the "gude wives" of the country bestow particular pains in seeking out from their old hoards all the bits of old blankets and flannel, wherewith to decorate the hives, and keep the "poor insects" warm, during the inclemency of the winter: this is all very humane and good-hearted, and I will grant the validity of the mode of management, when the hive has a superabundance of food; but, as in the case of deprivation, that portion is only left in the hive, which, on a proper calculation, ought to suffice for its support, it cannot, as far as my experience extends, be kept too cold. As an instance of the truth of this opinion, I will mention a particular experiment which I made on two hives of equal weight; one I placed in a green-house, subject to a moderate temperature; the other I left exposed to all the influence of the weather; the former I enveloped in blankets—to the latter I gave no covering at all, excepting what was necessary to protect it from the effect of snow: I weighed these two hives regularly every month, and in the month of February I found that the hive which had been kept warm, had consumed eight pounds of food more than the hive which had been exposed to all the inclemency of the season. It must, however, be allowed that the hive which had been so kindly nursed, swarmed ten days sooner than that which had been fully exposed; no objection, therefore, can exist to the keeping of a hive warm, provided a certainty exists of a superabundance of food being in store; but to a poor hive it is only increasing the evil, and hastening its destruction.

In treating of the effect of cold upon the hives, it would be running in the face of all experience to say, that cold has no effect upon Bees. I am able to adduce an instance, in which, had the circumstance not occurred to myself, and I was at the time well aware of the actual state of my Bees, it is probable I should have lost some of my best hives. Towards the close of February, 1820, a most severe second frost set in, my Bees, from the lateness of the season, were taking every opportunity of a fine day to leave the hive; but it was not till the latter end of March that I observed any farina carried into the hives. I was fearful that the severity of the second frost would prove highly injurious to my Bees; and observing a total inactivity in some of the hives, I examined them, and found the Bees clustering on the combs, and to all appearance dead: I was aware that Bees never cluster in a dead state, but only in a state of torpor. I therefore collected all the Bees; and carried the hive into the house, and placed it at a moderate distance from the fire: in about a quarter of an hour symptoms of returning life exhibited themselves; and in less than two hours the complete resuscitation of the Bees had taken place, and I had the satisfaction of returning the hive to its pedestal, with the whole community active and in vigor. I fear that the same circumstance may have occurred to many hives, during the frost of February and March, and many persons may have thrown away the Bees, on the supposition that they were dead. Few persons are aware of the length of time in which a Bee will remain in a torpid state, with the functions of life apparently destroyed. The Bees already alluded to, had been, probably, in that benumbed state for a week or fortnight, yet they were recovered.*

The hives should be carefully visited this month, and their internal health minutely ascertained. The late swarms should have particular attention paid to them, and every possibility avoided of their perishing with hunger.

It may happen, even with the most judicious management, that some hives will fail this month, and the Bees, on examination, will be found dead. I would advise the hive, if it be a new one, to be removed immediately into a dry place, and preserved for the ensuing season; but if it be an old hive, cut it up, and melt the combs—it is most egregious folly to put a swarm into an old hive; but where the combs are new it may prove of great advantage to the Bees, as the Queen will deposit her eggs immediately in the cells.

The field mouse now shelters in the hive,—let every method be adopted of preventing its admission. So eager is this little animal to shelter itself during the inclemency of the winter in a Bee hive, that it will frequently gnaw the band of straw in order to obtain admission, but as it is most destructive to the hive, living on the honey and wax, the utmost precaution is necessary to prevent its getting a footing.

Particular care must be taken this month, that the high winds which often prevail, do not overthrow the hives; I have frequently observed this accident happen to the careless apiarian, who very naturally blames the wind for it, whereas a rope, or a few stakes would have defied the strongest wind that ever blew.

Examine the tops of your hives—the vermin now take shelter under them, and by degrees insinuate themselves into the hive. A prevention is in all cases better than a remedy, and were this maxim to be adhered to more punctually in the management of Bees, the success would be greater, and the profit more abundant.

DECEMBER.

This month may be considered as entirely passive, on the part of the apiarian; the cold is, in general, too intense to admit of any operation being performed on the hives, should any be requisite, but excepting it be a casualty by an overthrow of the wind, or some other untoward accident, the apiarian will have little more to do this month, than to take a cursory survey of his hives, protecting them from snow, and prohibiting his Bees from leaving the hive. Let it be considered as a standing rule in the management of Bees, that the less they are molested or examined in cold weather the better. Every thing which tends to disunite the Bees in cold weather, proves highly injurious to them, for as they are kept alive in winter by a reciprocity of animal heat, nothing should be attempted, which has a tendency to diminish the temperature of the hive.*

The greatest danger which impends over a hive this month, is the snow; never let it rest on a hive, and confine your Bees during the time that it is on the ground.

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* *In a letter recently received from Mr. King, Brill, Bucks, he mentions having lost a hundred and fifty hives by the dysentery; some strong suspicion rests upon my mind that the Bees have been benumbed by the cold, and that Mr. King concluded they were dead. It is an unheard of mortality by the effect of a particular disease.*

* *In the middle of December, during an intense frost, I opened one of my most populous hives, and inserted a small thermometer in the most crowded part. The thermometer previously to the insertion was ten degrees below the freezing point at eleven o'clock, A. M. I suffered the thermometer to remain ten minutes, and on taking it out, it stood at ten degrees above the freezing point, making a difference of twenty degrees between the internal and external temperature of the hive. A Bee becomes benumbed in a temperature of two above the freezing point.*

Cotton Seed Oil.

Every planter in the Southern States is interested on this subject. Millions of bushels of cotton seed are annually converted into manure, for which it is intrinsically worth about twelve and a half cents a bushel. There are probably about three hundred thousand bags of cotton, averaging about two hundred and fifty pounds each made in the U. S.—for each bag there is about thirty bushels of seed of 25 pounds to the bushel, left on the plantation, which at the above rate, would amount to a little short of four dollars worth of seed for each bag of cotton. By the following statement from Massachusetts, it appears that a bushel of seed produces seven pints of oil: and that the remainder of the seed is equal in value to corn meal for feeding cattle. It is probable that a bushel of seed, even measure, light from the gin, would not be more than two-thirds of a bushel, after being packed and transported to Massachusetts; it may therefore be reasonable to calculate, for each bag of cotton of two hundred and fifty pounds there is produced twenty bushels of seed, that will yield one gallon each of oil, and that the seed meal will be equal in value to corn meal. If the oil is valued at one dollar a gallon, and the seed meal at thirty cents a bushel, it appears that the seed will be found to be worth, instead of about four dollars for that which falls from each bag or bale, at least twenty six dollars, being an increased value from the practice of oil making, of twenty-two dollars on each bag of cotton; and one crop in the Southern States, 6,600,000 dollars. Surely this subject is worthy of a more serious investigation than it has yet met with in the Southern States.—*Pee Dee Gazette.*

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FROM THE HALLOWELL GAZETTE.

Remarks on the means of preserving inhabited buildings, in which much wood is employed, from destruction by fire.

[CONCLUDED.]

In treating of the best method of preventing damage to buildings from fire, we shall employ none but popular language; for what concerns all, should be understood by all.

We shall lay down our principles also as briefly as possible.

1*st.* Heat may be considered for our present purposes, as divided into the heat of *flame*, *red* heat (which belongs to heavy bodies,) and what we shall term *dark* or dull heat. As to radiant heat (so called) we shall soon find that it has as little concern with our present subject, as dark heat. 2*d.* *Flame* does not issue from heavy bodies, till these bodies have lost more or less of their original texture; for as flame consists of inflamed vapor or gas, *this* must be produced before a body can be said to be in any part inflamed. As flame has thus its *beginnings*, if we can prevent these beginnings, we shall prevent *flame*: for as to red heat in wood, it is the mere *consequence* of flame, which turns it into embers.—3*d.* Atmospheric air has several properties, which require it to be noticed here: for when pure, this air feeds flame; when impure (or spent,) it extinguishes flame; when its bulk is increased by heat, it tends to ascend and to carry away heat in many cases; and it is lastly a bad conductor of all kinds of heat. 4*th.* Lord Stanhope's layers of plaster then have several important operations.—They prevent the *commencements* of inflammation from occurring in what is placed behind them; they shut out the circulation of fresh air: they are bad conductors of heat; and by helping to inclose layers of air, (which we have said is another bad conductor of heat,) they increase the impediments to the progress of conflagration. Plaster, we remember, is chiefly made from lime and sand, (that is, from incombustible *stone*;) and being turned back again into stone, when brought into the shape of *well formed mortar*, it is wisely employed to assist in dividing room from room, and floor from floor; in order to confine the inflammation to the spot where it originated.

In addition to these general principles, there are a few independent facts to be brought into view to add force to our explanations. 1*st.* When a fire is kindled on the surface of snow, cold air entering below among the fuel, rises upwards as fast as it is heated; and by carrying off the principal heat of the fire as it ascends, little of the *snow* under the fire is melted, even though many embers fall upon it. 2*d.* A *red hot cinder* of fossil-coal (here called sea-coal) may be laid on a fine cambric handkerchief, without even scorching it, provided the handkerchief be stretched on a smooth cold iron borrowed from the laundry—for the points of the cinder which rest on the handkerchief immediately become chilled, in consequence of heat being conducted downwards by the iron *below* or of its being carried *upwards* by the ascending air. 3*d.* The *surplus* wick of a fresh candle is easily destroyed by flame; but when the flame reaches the part where the wick is *penetrated with tallow or wax*, the wick remains entire, and is merely discolored by the flame; for it is not only protected by the melted tallow or wax, which keeps it out of the reach of fresh air; but the flame passes *parallel* to its sides, without striking through its substance.—These several facts shew by what easy means flame may sometimes be kept under good government.

Let us now make a direct application of our principles and facts to the case of fire acting on buildings.

Suppose fire to seize on some particular portion of a given apartment, the doors and windows of which are *closed*: here smoke is produced in considerable quantities, but there is little flame.—Fresh air however being permitted to enter by the opening of a door, the fire is enabled to convert into flame, all the smoke which it has created; and the fire soon increases its intensity.—But still, let the *sides* and *ceiling* of the room be covered with plaster, and let the *floor* also have plaster immediately below it; and the damage will not be serious, if the inflamed materials do not exceed a certain amount, and do not remain too long unmolested: and provided also that their influence does not reach to other places unprotected by these safeguards.

Again: to know the course of the *flame*, we must know the course of the *air*; for the flame floats about only by means of the air in which it swims; moving precisely as that air moves.—This air then by its heat rises; but still not so obstinately, but that it seeks to escape by doors, by windows, and by the chimney. The flame therefore does not particularly attack the *ceiling* which is incombustible, and affords no outlet to the air which it accompanies. Nor does it particularly attack the *sides* of the room especially if of plaster; for these are *upright*, and the flame merely moves in lines parallel to them.—The *floor* on the other hand if inflamed, has its flame perpetually lifted off from it by the ascending air; without which air it cannot long remain inflamed. *Radiant** heat also has little effect either to begin or to continue inflammation; or it would more readily melt snow, or burn a cambric handkerchief or the wick of a candle, than we find to be the case under the circumstances above mentioned. Thus we see on what simple measures in general the safety of a particular apartment may be made to rest, if we bestow due attention to it; particularly, as after a time we may generally expect assistance from without to subdue the fire. Still however a number of precautions are to be observed, which we proceed to enumerate.

1*st.* Lord Stanhope mentions one mode of protecting a *stair-case*; but he does not shew the great importance of providing this protection, nor give a choice of different modes of effecting it. We must supply both deficiences.

Dr. Franklin used to observe in conversation, that the English made *upright tubes* through their houses, in the form of stair-cases, which they covered with combustible materials, calculated to spread a fire from story to story; and thus to render the conflagration rapidly universal through a house, and at the same time to cut off all escape both for life and for property. The French on the other hand, he said, had stone stair-cases, or stair-cases formed of brick held in by solid pieces of wood bedded in mortar at least on two sides; with iron railing; so that no assistance was given to the fire in the French method to travel from floor to floor, but on the contrary a passage way was left open both for escape and assistance. Common sense sufficiently shews, that the French method of building a stair-case is abundantly preferable to the English, which is also the American method of building one; and when plastered below, it is also preferable to Lord Stanhope's.—As to the *iron railing*, some may object to it, on account of its giving passage to lightning, when not connected with a lightning rod; besides, that a *wooden railing* is easily struck away with any heavy or sharp body in case of fire, to prevent its serving as a means of communicating flame from one story to another.

2*d.* The *passages* of a house are next to be thought of, which if of unprotected wood, admit of fire passing along them and reaching from room to room. These passages then ought to be covered with flat brick, tiles, stone, marble, or with plaster work (called stucco;) unless Lord Stanhope's method be preferred by those who like to walk upon boards. But it is plain that this part of the house deserves particular study and that it may be treated in various ways accompanied with little expense.

3*d.* The *floors* of the upper parts, and often of the lower parts of a house, and especially of kitchens, &c. in various countries, are covered with bricks, tiles, or stucco; and where fires are constantly kept, are very warm, especially if covered with mats or carpets in winter. If left too rough, carpets put over them wear out faster than may be wished; but the French who tile many of their apartments and bed-chambers with care, and cover them with a preparation of wax, (daily rubbed by the *frotteur*,) find no inconveniences of this sort.

Some may prefer the neatness of clean or painted boards to these coverings, for stairs, passages, and apartments: but they should know what they pay for this apparent neatness; and that those who employ incombustible materials instead of boards, can obtain cleanliness, if they please, as well as themselves; with less noise from the feet in moving to and fro, and with a sleep undisturbed with the fear of fire.

Accordingly Dr. Franklin used to remark, that in France, fires were commonly confined to the mere *furniture* of a *single apartment*; but that in England, they often extended to *streets*; and in the United States, he might have added, they sometimes destroy whole *portions of towns.*

4*th.* *Partition walls* running from the bottom of a building to its roof, are of great utility, (made either of plaster according to Lord Stanhope's plan, or of common brick-work;) for in case of fire, by subdividing a house and consequently its dangers, they permit attention to be given to the part of the house which most requires it. By using partitions which are water-tight in their vessels at sea, the Chinese are said to confine the operations of a leak to one section of a vessel; leaving the other sections empty and buoyant.—And such is the encroaching nature both of fire and water, that each element requires the same principle for its treatment.

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* Radius *is the Latin word for* ray; *and as there is a tendency in heat to move off from an highly heated body in* right lines, *in which form light also is supposed to issue from the sun; we hear of* radiant *heat and* radiant *light.*

5th. The English in a large city like London, not only direct strong partition walls between *house and house;* but forbid the *timbers* of two houses from approaching each other too nearly, or from approaching any of the chimnies.—*Wooden Cornices* going from house to house are likewise forbidden. Great use has been derived from these regulations, the principles of which ought to be enforced by law in every country.

6th. The *roof* is a portion of our building requiring much reform. Roofs made of shingles are set on fire, not only in great conflagrations, but at other times by the very chimneys passing through them. It is true that slates and tiles have inconveniences also, during driving snows &c. which are not so properly remedied by wood-work underneath, as by suitable cements. Roofs are often reached with difficulty by fire-engines, from their position, and when they fall in, brands tumble deeply and widely into the breach below, to extend the evil.

7th. When houses are not built with brick or stone, plaster should cover their exterior. If plaster can resist (as it is known to do) the severe climates of Berlin and Gottenburg, it will also maintain its station here. Plaster *under cover* is never affected by cold; and it is easy to make plaster water-tight. Plaster is not expensive; and against its expense we must set that of our clap-boards and the paint bestowed upon them, and the protection received against fire.—The beauty of plaster certainly gives it another advantage not only over clap-boards, but over bricks, as may be seen in some of the late buildings at Richmond in Virginia; and the durability of the plaster at Richmond shews that it can be made to defy frost. Plaster requires three things; first, to be well made; next to be laid on in thin coats; and lastly to find a building of which the *foundations*, as well as the *wood-work*, are firm.

8 If the *foundations* of a building be not rendered immoveable by their depth and solidity, and if the *timbers* are not kept from warping; plastering must suffer, whether it be placed within or without. All know how to lay good foundations, if they will go to the cost of them; and warping may be prevented by filling up all the *angles* of the timber work with *triangular* blocks of wood, (or their equivalents.) Sir Richard Seppings has taught this secret to the natives of the world, and it will ultimately spread to our merchantmen; and should now enter our buildings on *terra firma.* The carelessness of our builders in common wooden houses, is seen by the risings and fallings often manifested in their floors after the lapse of a few years: and yet much of the use of plastering as a preservative against fire is lost, if the plaster be not solid and *air-tight.*

9. The *union of dwelling houses with out-houses* may promise some conveniences, but it will be found better to obtain these conveniences by passages, which can easily be torn down in case of fire; for otherwise *each* part of the double building is made subject to a *double risk.*

10. *Within* an apartment, care must be taken to have the cornices and didos, where used, well bedded in *plaster;* as also the skirting boards; and likewise to keep them as free as possible from contact with other wood-work. The same may be said of the casings of doors and windows; and also of closets. If either of these articles should take fire, and by its destruction, open a passage into the interior wood-work of the building; room is given for this entering wedge to extend the passage for air and flame, where the fire engines will not so readily extinguish the evil.

11. The *fire-places* in parlors and bed-chambers demand some notice. At present, in our common houses, the wood-work of our mantle-pieces, &c. projects beyond the brick, stone, or marble, forming the opening of the chimney.—The reverse of this ought to happen; and the wood-work should *retreat* at the sides, and also *not descend* to the floor. Again: the floor of the chimney should not be elevated, with a hearth *descending* toward the floor, down which brands and embers may roll; but the chimney floor should be low, and the hearth slant upwards.—*Fire-skreens* also ought to be flat, and suspended from the chimney jams; and be lifted by handles issuing upwards, out of their upward edge; by which they will remain firmly fixed, while in use; and be easily stowed away when out of use.

The kitchen, &c. should also receive some thought. The *oven* should have a good foundation, to prevent cracks; and some advise its being subjected to a red-heat, when first used, to give it a connected glazing. The *ashes* should have a fixed place from the first, and not be tossed about by fancy or accident. The *coppers* should be set with equal solidity and decision. Whatever doors are used about these places should either be of metal, or lined with metal. Kitchens should have very large hearths, and if possible not have their floors of wood.

12. *Chimneys* should bend in their course as little as may be; their flues should be separate from each other, from end to end; and they should be kept apart from all wood-work. Plaster may be safely laid on such chimneys, without furring, (as it is called;) and thus deprive fire of one of its hiding places.

So much for the modes of *preparing* buildings against fire.—A word or two will be said as to the mode of meeting fire, when it occurs.

1. Our ancestors talked of smoke balls for extinguishing fires; which must be of great use before the arrival of engines, or where engines cannot be applied: and as it seems easy to deprive air of its power of supporting flame from time to time, by a succession of these balls, it is hoped that our modern chemists will not long suffer this to be reckoned among *the lost arts.* 2. Mr. Perkins's *Supply-Engine* for gathering up the water running along the streets at fires, is cheap and of great use, where water is scarce; especially as muddy water is said to be more efficacious in putting our fires, than water which is pure. 3. Wet mops, with long handles, are good for shingled roofs: and large tin squirts are useful for the same purpose, and for crooked places. 4. A little sand is no mean thing to keep at the top of a house, ready to be wetted, in order to extinguish fire, or stop up smoke-holes. 5. Wet blankets put before chimney places, have often been efficacious in putting out fires in chimnies. 6. Small engines, to move about for the mere purpose of keeping buildings *damp*, when exposed to fire are very serviceable; particularly as they prevent the loss of time and the breaking up of water-lines, which usually follow upon moving the greater engines to act for the same purposes. 7. Large cisterns or pits in the earth (for making which there are various receipts in books) in order to hold rain water, especially on the sides of hills, are very important; for of what use are engines without water?

These are transient hints; and let others add to them. We have a great enemy to contend with, which, though often easily conquered in its beginnings, yet when that golden moment passes by, often defeats our best exertions; for as the evil proceeds, every part of the *effect* becomes a new *cause* for further mischief. A. B.

P. S. Lord Chatham's insinuation against Charles II. recorded above, is scarcely to be considered as serious. Charles certainly did not (as Nero is reported to have done,) fiddle during the conflagration of his metropolis; though his brother (afterwards James II.) shewed much unconcern amidst its ruins. In truth, it was needless for either brother to have urged forward a project, which others were as eager to propose, as to execute. Happily none of the expected confusion arose from the event; and the rapid restoration of the city, as it marked the wealth and energy of its inhabitants, so it proved the origin of a new order of things; one happy result of which appears to have been, the prevention of any subsequent appearance of the plague in England.

Extracts from the last file of the London Farmer's Journal, received at the office of the American Farmer.

MR. CURWEN'S STATEMENT OF THE EXPENSES OF SOILING.

Schoose Farm, Dec. 4, 1821.

Sir,—I embrace the first leisure moment to comply with your wish for information on the expense of preparing steamed food for cattle.

The cost of the apparatus may be esteemed more considerable than it actually is; I think it expedient therefore to state the expense of a steaming apparatus adequate for supplying food for 100 head of cattle and 50 horses.

The water is boiled by steam, which is introduced into the boxes by iron pipes. It requires a strong power of steam to heat the water quickly and prevent its being smoked, which renders it unpalatable to the cattle.

The capacity of the boiler is a thousand gallons; first cost, setting, &c. about sixty guineas, It is capable of working three stone boxes, five feet long, four broad, and three deep; likewise an iron box of equal dimensions; and also to warm the water necessary for the dairy. By stop cocks either the whole or any number of the boxes may be worked.

The stone boxes, iron pipes for conveying steam, and also supplying water, with the pump, &c. might, exclusive of the building, cost £100.

Two women are fully equal to the whole business, as well as for washing and cutting by a water wheel the Swede turnips. Six boxes are steamed five days in the week, and nine on the Saturday for Sunday's food. The boxes are filled one third with water, from 25 stone to 30 of chaff, (husk or grain) and about 30 stones of cut Swedes. When completely boiled, which, when the steam is completely up, may be an hour and a half, the drinks are lifted into iron boxes; the contents, without the liquor, may exceed half a ton. Iron boxes are used for receiving the drinks, as they cool the food more rapidly than wood; it would be injurious to give the food too hot. On serving the cattle, salt is applied, allowing after the rate of four ounces to full grown cattle, and one ounce to calves. The general quantity may be from four to six stone in the two feeds to full grown cattle, and in proportion to younger stock. The appetite with which the preceding drink has been eaten regulates the feeder, and on this much depends. Milch cows, in full milk, have a little bran mixed with their steamed food.

The great advantage resulting from a portion of steamed food is the keeping the stomach in good order; lessening the quantity of turnips which would be otherwise requisite. Instead of six stone, which is ample, nine would be required. It also lessens the demand for straw; about 8 lbs. per head will do.

Work-horses have 10 lbs. of cut hay and an equal quantity of straw steamed, with three lbs. of oats and the same weight of straw; with this feed they are in admirable working condition.

The whole of the stock are reared in this manner, and never set their feet on the grass.

Between three and four years old they reach from 70 to 80 stone. Two killed last month, three years three months, carcass 76 stone 8 lbs. and 74 stone 10 lbs. with 9 stone of loose fat, long weight. The meat is of most admirable quality. I can only furnish you with the cost of food as applicable to this spot, where fuel is so cheap; fifty-four Winchesters of inferior coals are consumed weekly, two thirds of better coal would do the work.

Cost of preparing steamed food for one week for 100 head of cattle.

Two women's wages . . .	£0	12	0
Fifty-four Winchesters of coals . .	0	9	0
Taking the food from the steam-house, and giving it to the cattle, . .	0	17	6
Seven tons of cut Swedes at 7s. 6d. per ton	2	12	6
Wear and tear of machine . . .	0	10	0
Chaff	0	0	0
	£5	1	0
3360 stone prepared weekly at two thirds of one half-penny per stone, . . .	£5	5	0

Cost of one full grown steer for a day.	s.	d.
Steamed chaff	0	2
Six stone of Swedes	0	3
Straw	0	2
	0	7

or four shillings and a penny per week.

After this statement, the question that would naturally be put is,—What condition are the cattle in? I would be the last person who would chuse to make an answer; I may however confidently state, of the many visitors to the Schoose, I have seldom known any one to withhold his surprise at the health and order, not of a few, but of the whole stock. I am, with much personal esteem, your obedient servant, J. C.

N. B. No credit is taken for the fuel consumed, or the labour in preparing food for the horse.—My wish has been to over rather than under rate the expense. Neither hay, corn, nor cake, was used for any of the stock.

There is within two miles of this city, a milk establishment, on the farm of R. Smith, Esq. President of the Agricultural Society of Maryland, where upwards of 100 cows are sustained on *steamed-food*. An exact account of this establishment, with drawings and details, expenses and results, would make an interesting communication for the Agricultural Society.

Edit. American Farmer.

ON FEEDING SHEEP WITH ROOTS.

Kelmarsh, Jan. 3, 1822.

Sir,—Being very much at a loss in what way to reconcile the result of your correspondent's experiments, who appears before us with the signature of *P.*, in your Journal of December, the 24th last past, I beg to trouble you with a few remarks upon his letter. I trust he will excuse me calling upon him for an explanation, why he should recommend mangel wurtzel, when I assure him, that I am ignorant both of the proper mode of cultivating it, and (though with his letter before me) of an advantageous application of it. Yes.—I even make this last declaration with the fact, as it is stated to me, staring me in the face, that 8lbs. per quarter may be added to a sheep in five weeks by the use of this root. But without doubting the possibility of such a result, let me examine by the test of my own experience in other root crops, what may be the probable produce of an acre of mangel wurtzel well cultivated (be it remembered that I am going upon supposition:) and now supposing that 1, 2, or 3 roots may be grown upon one square yard, weighing together 14½lbs. hence that about 31 tons shall be produced upon an acre;* what number of sheep, I would ask, will this acre keep, for the space of 20 weeks? and what, by consequence, will be a fair valuation of the crop? This question I answer by *P.'s* report, who says, that he gave to each sheep 25lbs. of the roots per day (if I understand him right,) and therefore, with this quantity, an acre would suffice for 20 sheep. Now, as 6d. per head per week for sheep at Sweedish turnips has lately been a low price, I shall take 6d. for my calculation, and so make the acre of mangle wurtzel worth £10, allowing their comparative value to be equal, (an acre of Swedes will, I know, keep 20 sheep 20 weeks *without hay*, though not a first rate crop:) here then is £10 in roots. But we have now a more important article to notice, namely, the hay which *P.* has thought necessary for each sheep, viz: 5lbs per day; thus consuming, with 20 sheep, 6¼ cwt. per week, which, for 20 weeks, I value at £25. It must now be asked, in what way 20 sheep can be make to leave a fair profit, having consumed in 20 weeks £35, worth of food, besides the labor in preparing it? I answer, by *P.*'s method, and success only. But it has occurred to me, Mr. Editor, that I may have mistaken *P.*'s statement, and that, instead of 25lbs. of roots per day for each sheep, he means 25lbs. per day only for the 8 sheep; though, as the difference is so great, I am frightened back to my former construction of his letter; indeed, the latter quantity cannot I think, be sufficient, though the former appears far beyond probability. Without farther comment upon the quantity of food necessary for sheep. I shall just state, that 230 lamb-hogs, and 40 old sheep of mine, are now doing well with about 2400lbs. of Swedish turnips per day and 250lbs. of oats and cut straw mixed; by which it seems, that not quite 10lbs. of food is the average quantity consumed by each sheep per day.—Such of your readers as may chance to contrast my report with that of *P.'s*, will perhaps observe, that mine is accompanied by the signature of my name. If *P.* means to say, that his sheep were fed with 3lb. 2oz. of mangel wurtzel, and 5lbs. of hay (a quantity of food approaching near to mine,) instead of 25lbs. of that root, then I call it feeding with hay and not with the roots. I have now only to return to the weight said by *P.* to be added to each sheep in a given time, namely 32lbs. in 5 weeks, which strikes me with wonder, knowing as I do that the five best grazing *months*, commencing with May, will produce at grass no greater weight, taking the average of 100 sheep, though they shall be of the most thrifty sort: and further, that an increase of weight, in proportion to the said statement, carried on progressively for the said five months, is no inconsiderable thrift even for an ox of the middling size; as, according to this gradation, he adds 16 stone to his weight, which would at 5s. per stone, leave the grazier a remunerating profit. I have spun out my remarks probably to the tiring of your patience, for which, therefore, I have to apologise. If, at any time you may think it proper to give them a place in your valuable Journal, you will much oblige, Sir, your very obedient servant.

WM. THORPE.

CULTURE OF POTATOES, AND PLOUGHING AFTER TURNIPS.

Norfolk, Jan. 6, 1822.

SIR,

I some time ago promised you the result of an experiment I was then making in the culture of potatoes, which I now send. My object was to ascertain whether it was better to plant cuttings of large potatoes, or whole ones about the size of large walnuts; also, the comparative merits of three sorts, one which I have had long in my possession, and on which I mainly depend; another, of very great size, given me by a friend; and Phillipps's red, which you procured for me in the spring of 1820. In that year the produce of the red was very inferior in quantity to the other; but observing that it produced very little top, at most not half so much as the other. I determined to give it another trial, and to plant the sets in every way closer, and which appears to have brought i nearer in quantity to the other.*

With the mode of preparing the land, I shall not trouble you. It was alike in every respect, and what difference there was in natural quality, was in favour of what I shall call No. 4. and gradually decline to No. 1. The potatoes were planted in two broad ridges, or warps, adjoining each other; the sorts separated by the furrows, and the whole done by the same two men, in the same manner, and as near as possible at the same time, except, as I before observed, that the red were planted twice as thick as either of the others.

	A	R	P
No. 1, was planted with my own sort, large potatoes, in cuttings containing two or three eyes each, and occupied - - - - - - - - - - - - - - - - -	0	1	3
No. 2, the same sort whole, but smaller	0	1	4
No. 3, the large potatoes I had from a friend, cut to two or three eyes -	0	1	6
No. 4, the red, some cut, some whole	0	1	9

No. 1, produced 42½ sacks, or 160 sacks per acre, the potatoes larger than those of No. 2, and in every respect better.

No. 2, produced 40 sacks, or 145½ sacks pr. acre.

No. 3, 30 sacks, or 104½ per acre.

No. 4, 34½ sacks, or 113 per acre; but if we subtract the extra quantity of seed used, to say nothing of double the expense of planting, it will reduce the produce of No. 4 to 105 sacks per acre.

I have now by me, upwards of 3000 sacks of potatoes, safely packed, the produce of about 25 acres. I commenced feeding twenty Scots and twenty heifers with them, about a fortnight ago.

Much has been said in your paper of ploughing, or not ploughing land, immediately after the turnips have been fed off. I shall do this year just the same as I have done for some years past,—plough for my barley much less than my neighbours do. I have now a piece of 28 acres cleared. As soon as it be dry enough, and not too dry, I shall plough it clean, and at a moderate depth. A short while before seed time, I shall harrow it, first with rank, and then with finer harrows, roll it with a light roller, sow the seed broadcast, and plough it in with our light one horse ploughs, made and used for that purpose only. In this way, I put in about 140 acres last year, and nearly the the like quantity annually for some years before. I am satisfied that the less you stir your land, the better your chance of a crop of clover, and therefore I always sow trefoil after potatoes, because the culture, takingup, &c. of that root, necessarily renders the land so much more loose. I am satisfied it is still more requisite to plough very little for barley on strong land, provided that ploughing be given when the land is exactly in the state to receive it. I was obliged last Michaelmas to take a heavy land farm into my own occupation, where, if I can, I will plough but once, sow or drill, and harrow in. I will wait almost for ever, rather than plough when the land is not in exact order.

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* *At* 18 *inches apart the rows, and a foot the plants in the rows, each square yard will contain six roots, which, at only four lbs. each, gives more than* 53 *tons.*—Edit. Farm. Jour.

* *It deserves to be proved by experiment whether potatoes which give large tops should not be preferred on* dry soils, *and those which give short tops, on rich and mellow soils.*

OBSERVATIONS ON THE

NATURE AND PROPERTIES OF THE YELLOW TURNIP.

Drawn up at the request of the Right Honorable Sir JOHN SINCLAIR, *Bart. by* R. BARCLAY ALLARDICE, *Esq. of Ury.*

I certainly think, taking every thing into consideration, that the yellow turnip, *when of the proper sort*, is the best kind of any. I proved last year, that they had double the keep of the common turnips; for the same number of sheep that required shifting twice a week on the globe and red sorts, when they came to the yellow, required only being shifted once a week. They have also many advantages over the Swedes. They will grow on inferior land, and with less manure; and may be treated in the same manner as the common sorts of turnip. Indeed, I have got a proportion of Swedes, that were manured at the rate of thirty-five double cart loads per English acre, which is at the rate of from ten to fifteen loads more than the yellow, yet the latter is *very superior*. They have not that hardiness, also, which the Swedes possess, which is so injurious to young stock and to sheep. The *proper sort*, likewise, will stand the winter equally well.—Cows fed on yellow turnips, give milk and butter, equal in quality and flavour, to the middle of summer. The best time for sowing them in the middling districts of Scotland, is from the 10th to the 20th of June.

In cultivating turnips, I found the Revolving Harrow of the greatest service. I grew them in one field of twenty acres, which got one deep ploughing before winter, after oats. It was never touched again till the middle of May, when the whole culture, previous to the drilling, the dunging, and sowing, was done by the Revolving Harrow. I have just drawn a third part of the crop of turnips, and placed them according to the plan recommended by Mr. Blaikie. By a fair trial last year, I found they would keep, when placed, from November till the middle of May; and that tops and ail, they were as good and fresh as the day they were drawn. I showed them in May last to several farmers, who cut them open, and convinced themselves of the great superiority of Mr. Blaikie's plan, over every other, for preserving turnips. It is now getting into very general use in this neighbourhood.

Ury, Nov. 5th, 1821.

We suppose this to be the Scotch yellow turnip, sent to R. Caton, Esq. by Mr. Coke, and distributed amongst some of our subscribers.—Peter Minor, Esq. of Virginia, speaks highly of it.

Edit. Am. Farmer.

APPLICATION OF THE HOLKHAN MANUFACTURE.

North Creak, Burnham, Norfolk. Nov. 30, 1821.

SIR,—As I was riding through Holkham, a short time since, my eye was caught by a number of poor people passing to and from the Hall: on inquiring the occasion, was informed that Miss Coke had been giving her annual donation. The poor had received one hundred large good-blankets, with a great many sheets and bed coverlids, to keep them warm the approaching winter.—They spoke of the sheets with unusual pleasure, stating, that they were dressed and spun by themselves from the flax grown in the Park last year: they appeared grateful, and said that they had been now doubly paid, first for dressing and spinning them, and now receiving them as a free gift. They are all now busily employed in dressing and spinning the flax grown in the Park this year. Their benefactress is indefatigable in her attention to them, observing St. Paul's directions to the Hebrews, "To do good and to distribute forget not, for with such sacrifices God is well pleased." I did hope to have seen more of the neighbouring gentry following such a laudable example, and setting their poor deserted neighbours to work; but I fear they don't observe what St. John says on brotherly love to one another: "Whoso hath this world's goods and seeth his brother have need, and shutteth up his bowels of compassion from him, how dwelleth the love of God in him?" The poor are willing to work if employment is found for them. Something must be done for them, and that *immediately*, for it is now out of the power of the farmers to support them.

You would gratify your readers, Sir, if you will select such things as you think worthy their notice from the Bath Agricultural papers, they being too voluminous to meet the public eye; much valuable information lies in obscurity in them, but by this means would be made useful to the public. The culture of lucerne is not generally so well known as it ought: your quotations from those papers will be found useful; but three feet intervals, as mentioned there, are too wide; although a great weight may be obtained, the outside plants in the rows fall down on the fresh mould in those wide intervals, and in rainy weather get so full of grit, that the stock will not eat it. The best plan that I have found to answer, is to drill at twelve inch intervals; to hoe and weed the plants, keeping them clean the first two years. If the ground is very good, and the plants very vigorous, every other row may be taken up, and the crop will then do well, as the intervals may be ploughed, and the plants receive a fresh supply of mould for their support. Your very valuable correspondent, Mr. Curwen, I should think, might grow this plant to advantage for soiling; but in preference to any thing I have yet seen for fattening of cattle, are the mangel wurtzel roots; much greater weight of valuable food may be obtained per acre with them than from any thing we grow; and they have this advantage over turnips, they will continue good all the summer, if laid up dry in pies, the same as potatoes generally are. I am, Sir, your's respectfully,

THOS. HEROD.

☞ From recent information it appears, that lucerne will not succeed on heavy land, and consequently would not do well with Mr. Curwen. The mangel wurtzel is very valuable, and we learn that the *yellow* sort is by much the more fattening, although it does not give so large a crop.

Edit. Farm. Journal.

ON TARES.

Bedfordshire, Dec. 1, 1821.

SIR,—In the late Farmers' Journals we have been reading much concerning tares. They are estimable upon heavy soils, whether used as green food, or eaten off by sheep, or preserved for seed, for which latter purpose they have often paid as well as a wheat crop. We also consider that there is no better preparation for whatever corn may follow, particularly for wheat: upon the authority of some of the best Norfolk farmers, we must however conclude, that their culture is less applicable to light sandy soils. It surprises us, that a question should have arisen, whether there be a real distinction between summer and winter tares. It may perhaps not be possible to discriminate the seed of the one from that of the other; but when they get into leaf, the winter tare is of a deeper duller green, and is less luxuriant. The leading difference, however, is, that the winter tare never suffers from the severest frost, if it have once well taken root; while the other is sure to die in any but the mildest winters. A neighbour of mine happened not to have seed enough for the whole of a field destined for winter tares: he obtained some seed to finish with, from a distance: at first the more rapid growth and lively green of the latter appeared flattering; but they proved to be summer tares, and all perished in the winter, while the others were unaffected. The winter tares cannot be put in too soon after harvest; the others should be sown at intervals, from March to June: both are fittest for mowing green, and most healthy for cows and horses when the blossom drops off, and the pod begins to form.

As it is right to try every-thing, I drilled last spring three acres of Heligoland beans. All my other beans, about forty acres, inclusive of some in the same field with the above three acres, turned out every thing I could wish; but so miserable a crop as the Heligolands never was seen on my farm. There was no fullness of fruit to compensate for the shortness of the straw; and as always happens where there is failure, weeds usurped the space that should have been occupied or shaded by the beans, with probable injury even to the wheat in the succeeding season. I expect to have to encounter a contrariety of opinion; but never again will I be induced to try this puny abortion of a bean. Your's, &c.

BEDS.

DISTILLERIES.

(From Mr. MIDDLETON'S *Survey of Middlesex, published in* 1807.)

Under the above head are the following observations on the value of the grains and wash (that is, the refuse of the corn distilled,) by which it will appear that but little of the *food* of man is deducted from the corn. The quantity per annum is estimated at 500,000 quarters. The distillers fatten annually 50,000 hogs for bacon, increasing the value of them £4 each or £200,000. Also, the wash probably increases milk and beef in Lóndon, besides paying for all the hay and other things eaten with it, to the annual amount of £130,000.

"It redounds much to the credit of Mr. Man, of Bromley, in this county, who about the year 1789 began to give distillers' wash for the fattening neat cattle, which so evidently improved them, that he soon tried mixing other food with the wash, in order to induce the cattle to eat more in quantity, to consume it in less time, and to increase the number of hours for them to rest.—This succeeded in so extraordinary a manner, that he has extended his buildings, and increased the number of his bullocks, so as to be able to feed a thousand at a time; and he frequently has nearly that number in his stalls. I understand he can in this manner fatten between four and five thousand oxen and cows annually. At this time (1803,) he cuts into lengths of an inch and an half, or two inches, at the expence of two guineas, thirty-five loads of clover hay per week, which is immediately put into a large cistern, containing a considerable quantity of the foregoing wash, where it steeps, and with the contents of this cistern, probably in a state of fermentation, his cattle are served by pailsful poured into their mangers. This nutritious mess is thus given to them four times every day. After the lapse of a few days at first, they greedily devour this mixed food, and during the rest of their time they amuse themselves by eating a small quantity of the best hay, chewing the cud and lying down, by which system they fatten in the most speedy manner.

"During the three or four first years of this practice, Mr. Man obtained the wash for nothing: the secret then began to extend, and the wash is now fetched from the distilleries to all the environs of the town, and even to the distance of ten or 15 miles, although it is now sold at 2s. 6d. per butt. The whole quantity of wash made at all the distilleries in and near London, used to be drained into the river as of no value; it is now sold, and so desirous are the cow-keepers and cattle-feeders of obtaining it, that carts, to the number of ten to twenty at a time, may be seen waitingto be filled in turn, when the wash is turned off."

Receipt to make good Bread from the Flour of grown Corn.—Mix one ounce of magnesia with every stone of flour; then make the bread in the usual way. Magnesia restores those properties to the flour it has lost by growing, and is quite imperceptible in the bread, both as to taste and effect.

The magnificent woods of Holkham have this season afforded the most brilliant sport. The Dukes of Gloucester, Norfolk, and Bedford, the Lords Tavistock, Althorp, Dynedoch, and Nugent, Sir Ronald Ferguson, Sir Harry Goodwin, General Walpole, Admiral Lukin, Mr. Adair, &c. were among some of the best shots. The first day, Nov. 7, the number of game killed was 603; on the 8th, 609; and on the 9th, 855 head bagged, part of which were 502 hares.

Editor's Correspondence.

Nelson County. Va. April 8, 1822.

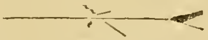
We are about to establish an Agricultural Society, for the purpose of ascertaining the best routine of crops, for a hilly country like ours, with a light dry soil, abounding as we think in calcareous matter, and more particularly with a view to combine the culture of Tobacco, with an improving system of Husbandry.

ON BUDDING AND GRAFTING.

District Columbia, 9th April 1822.

DEAR SIR,

I just took up your paper No. 1. Vol. 4th, being employed in sorting the 3d Vol. for binding, and having nothing to do else, make the following remarks. On page 6, column 2d on *fruit trees*, your correspondent says, the apple and pear, apple and quince, cherry and plum, will not grow together, that is, take by grafting or budding. I say, the pear and apple will grow on each other, either by grafting or budding, and either on the quince or thorn, and that the plum will grow on the cherry, but I could never get it to live above two years, the plum part dying. I have had plums, apricots, and peaches, on the cherry, all on one tree, but they died in two years. The apple and pear are now growing, on each other, and on the thorn and quince, and *the pear is greatly improved*, by being put on *the apple*. This I was told, was practised at Belle Air, the seat of Benjamin Ogle, Esq. Prince George's, from which I took the hint; there is always a large knot found, at the junction of each, and I don't think the wood joins so strongly as when they are on their own kind. Budding should always be done as soon as you can get them, I mean as soon as found on the trees, and in a fit state for budding. I have brought trees forty miles, and kept them a fortnight, and they grew as well as if just cut; but when put in water to keep alive, it should be in a tumbler, to keep them close together without injuring them by tying, and not more than one an a half inches of water in the tumbler; for if they stand a day or two, the part below the water is spoiled—they should, when budded, be tied tight with narrow tape that will not cut, such as stationers red tape as to width, and never untied till flourishing; the top of the stock should be cut off, saving two or three shoots to keep the tree alive, and draw up the sap thus:



this operates to make the bud shoot the same year, and I have had them grow six feet, as Mr. Jefferson has seen at the President's House; they should grow the first year, for otherwise many will be lost. I know I have all the books and foreign gardeners against me, but Exitus, acta probat.—Old as I am, I am full of scraps of Latin, *a remnant of Latin, to puzzle the Vicar*; after all this it is like getting a child, you have to educate him; you must watch your grafts and buds, and never suffer a shoot to grow below it or the graft or buds dwindles; examine them once a week, and rub them all off.

The author of the preceding is known to, and highly respected by the Editor. With habits of close observation and a memory as unfailing as death—he has acquired an inexhaustible fund of anecdote and useful information. But our personal knowledge is not every one's knowledge, and when writers dispute facts asserted under the sanction of a name, they ought to allow their own names to be given to the publick.

Edit. Am. Farmer.

OXFORD, March 21, 1822.

Dear Sir,

Herewith I have the honor to send you a Recipe to prepare a wash for your Fruit Trees, which when you use it, never be afraid of letting it run down in great plenty about the roots, as it is a most powerful manure, and will force the fruit on your trees; after your trees are in full bloom or leaved out, it is best not to wash the buds in it, as it is too powerful for them to stand such a shock. I beg you to accept of the use of it.

I make use of many other ways to bring fruit and trees to great perfection, all found out myself.

I am, Dear Sir, in haste,
Respectfully yours, &c.
J. WILLIS.

Take strong soap suds made of soft soap, put it in a tub or cask, with one head out, and let it stand in the air where the rain will not fall into it, and put as much strong tobacco, or tobacco stocks, as will when well soaked, turn it of a reddish colour and in a few days will turn quite offensive; then to every five or six quarts of the suds, put in one quart of strong beef brine, stir it well, and wash the trunks of your fruit trees and large limbs with it, such as apricots, plums, and peaches, &c. you will find it of great utility against frosts and insects; this is my own discovery, and I use it on some trees three times from the 15th February to 6th April, with great success.

Having regard to the extraordinary and well known excellence of his fruit, we consider every hint from Mr. W. as a treasure to the young farmer. It is in this way that we flatter ourselves, we often give the value of the subscription in the promulgation of a single recipe—the result of many years of skilful attention and labourious care.—*Edit. Am. Farmer.*

TO THE EDITOR OF THE AMERICAN FARMER.

SIR,—You give in your last, long notices in favour of Devonshire cattle, and tell us, what Bingley and Sherwood, Evans and Ruffy, and a host of such writers have said—you "venture to assert"* that "in the United Kingdom," no cattle were found for purity of blood, for aptitude to feed, for hardiness, for work, and for the richness of their milk," to be compared to "North Devons, as by a variety of experiments" had been shown. As a wonder, you quote Mr. Bloomfield's success, *whose picked dairy* of "twenty cows, and heifers produced only, "an hundred and thirty pounds of butter a week, and Mr. Oakes' good luck, in having a Devon, which produced sixteen pounds and a quarter a week, in the same time. I wish you would state what these cattle have done since they have come to America, where they have had, I am quite sure, all the care, and attention, which wealth, and good management on such rare curiosities, could bestow. You have stated, that "this beautiful breed, in genuine purity, are now to be seen at Clodspring," and at Brooklandwood, we are told, that Mr. Wamsley (the Manager,) has them with all the "characteristics" established in their race. Will you have the goodness to show, the weight of his calves at a fixed age, the dimensions of his cows, *the quantity of their milk*, its product in butter, and how long *they remain dry?* We Yankees are fond of occular demonstration, and when we are at a distance, like lawyers confine our belief, to the best evidence, which the nature of the case can admit. I attach more importance, to the word of Mr. C. than to quotations from books. Pray obtain, if you can, the information I have asked, as I am anxious to buy one of the calves from his estate if the accounts I have heard, should *in America* be confirmed. I send a memorandum of the quantity of butter afforded by the Southborough cow; you long since have given proof, which cannot be questioned, that Mr. Oakes of America, (no doubt the relation of his name sake in England,) raised a cow, which yielded in butter, far more than Bloomfield's; and more than the other, by three quarters of a pound. I have seen in Pennsylvania a cow which produced weekly sixteen pounds.—My friend, Mr. Williams of Northborough, has two cows, which in June gave together regularly thirty quarts of milk at a meal, one of them *at four years*, afforded with but common care, nine pounds of butter a week. But lest American testimony should in all cases be disregarded, as with the Devons it has been, I beg you will publish the extracts I send you from surveys, which were made by persons selected for their knowledge and skill, by the National Board of Agriculture of Great Britain.

Yours, &c.
JONATHAN.

Queen's County, New York.
24th April 1822.

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* *The Editor has made no assertion on the subject.*

Memorandum. Mr. Marsh's cow at Southborough, produced between the 9th April 1817, and the 29th March 1818, 480½ lbs. butter, equal to 9½ lbs. per week, throughout the time. An IMPORTED DEVON, in the neighbourhood of this cow, fed upon the finest pasture, and attended with proper care does not, I am led to believe afford half so much.

EXTRACTS.

Middleton, in his "Survey of Middlesex," says, "The heaviest, and best short horned cattle in Britain, are reared on land adjoining the river Tees; they highly deserve to be called the Teeswater cattle."

"Of this breed, several oxen, weighing from 120 to 140 stone, each (14lb. to the stone,) have lately been slaughtered in the northern part of England: one of them, only five years old, which received no higher food than grass and turnips, weighed upwards of 33 stone per quarter."

"It is supposed, that this breed yields a greater proportion of lean meat in any given weight of beef, than any other; therefore there is less waste of fat, and the meat goes farther in any family. This is the criterion of serviceable animal food; *the greatest quantity of lean meat in proportion to the fat.* All the Agricultural Societies, should attend to the distinction of promoting an increase of muscle; this would be much more valuable, than bestowing premiums for the greatest quantity of fat."

Extracted from 13 pages on praise of short horns.

Baily in his Survey of Durham, says "The cattle bred in this county, have for a great number of years, been of the short horned kind, the best variety of which, having been long found on both sides of the river Tees, have for a great many years been known by the appellation of '*The Teeswater breed.*' The pure Teeswater breed, has descended to the present time; in which were united the properties of feeding to great weights, and being GREAT MILKERS. . . . .

"This bull and cow, selected with so much judgment, are the original stock from which the celebrated Durham Ox, and the justly acknowledged superior breeds, in the possession of Mr. Charles Colling, Mr. Robert Colling, and Mr. Christopher Mason, are descended.

"Messrs. Collings have frequently sold cows and heifers for £100, and bull calves at £100—Mr. Charles Colling has refused £500 for a cow; and in 1807, Mr. Mason refused 700 guineas for a cow.

"These gentlemen let bulls out by the year; the prices from 50 to 100 guineas; and the public are so fully convinced of their merits, that these celebrated breeders, cannot supply the demand from the PURE BLOOD, which they are cautious of preserving, as the amateurs of the turf are the breeds of their race horses."

"*The Durham Ox* was bred by Mr. Charles Colling, of Ketton, in the year 1795—at five years old, he was not only covered thick with fat upon the principal points, but his whole carcase in a manner loaded with it, and was then thought so wonderful an animal, and so far exceeding whatever had been seen before, that he was purchased to be exhibited as a show, by Mr. Bulmer, of Harmby. Mr. Bulmer sold him to Mr. John Day on the 4th of May, 1801, for £250—on the 8th July, Mr. Day could have sold him for £2000"—at 10 years he weighed 3780 lbs.

"*A Cow of Mr. Mason's, of Chilton*, in point of fat, not less remarkable than the ox. The depth of fat from her rumps to her hips, in a perpendicular position, was not less than 12 inches; upon her loins and crop, not less than 10 inches; and the shoulder score at least 9 inches thick."

"Mr. Robert Colling has a white heifer, four years old, a perfect counterpart of his brother Charles' ox; being, like him, completely covered over her whole carcase with fat: she is estimated to weigh 130 stones," equal to 1820 lbs.

"Their management is as follows:—In the first winter they get straw in a fold yard, with nearly as many turnips as they can eat; in May they are turned to grass; in November put to turnips through the winter; and turned out to grass the first week in May."

Strickland in his Survey of the East-riding of Yorkshire, says, when referring to the cows of the unimproved breed of short horns, "Many indeed may be found, which give EIGHT GALLONS PER DAY, and there are instances of a still greater quantity. The milk is also RICH in quality, as there are instances of 16 lbs. of butter (18 oz. to the lb.)" equal to 18 lb. of 16 oz. "being produced weekly from one cow, for several weeks after calving."

"Many bulls have latterly been purchased and hired into the East Riding, at high prices, from the neigbourhood of Darlington, in the county of Durham, where a much superior breed of short-horns are found, possessing all the perfections and qualities which are wanting in the Holderness breed."

TO THE EDITOR OF THE AMERICAN FARMER.

Philadelphia County, Penn.
17th April, 1822.

SIR,

I am glad to find, that although you have advertised "Bergami" for sale, you are so well satisfied with Teeswater cattle, as to order a Bull and two Heifers from Mr. Champion. I have no doubt your spirited efforts will be rewarded, notwithstanding the high prices which he requires for his stock.

If it were fashion alone which gave to Teeswater cattle celebrity in England, it has affected a class of men during six and twenty years, whose circumstances and position have in all other instances, protected them from its sway.

In 1796 the enormous sum of 2000 guineas were given for the Durham Ox—in 1810, 1000 guineas for Comet—*in* 1822, 500 guineas for Major Rudd's heifer—at this moment 1000 dollars are asked, by Major Jacques, of Charlestown, near Boston, for a *calf*, by *Cælebs.** Last summer, Mr. Williams, of Northborough, could have had 1000 dollars for his admirable bull Denton—and within a few months, 500 dollars have been given for two cows of the same breed, by a person who knew it in England, and who for three years has had improved short horns on his farm. The admirable properties of the fine cow at Druid Hill, must have satisfied you, that "*as milkers*," the improved short horns cannot be surpassed.

CURWEN.

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* *He bulled 52 cows last seasou, at $10 each.*

RECIPE.

To destroy or drive away Bed Bugs.

TO THE EDITOR OF THE AMERICAN FARMER.

Sir,

During last summer being much troubled with those pests to house-wives, bed bugs, I tried the various means I had heard of, to expel them from a beadstead they had chosen for their abode; but I found none of them would effectually answer the purpose. After pouring boiling water on some, I watched them, and perceived though they lay apparently dead for a length of time, the most of them would revive. The same happened when I applied spirits of turpentine, corrosive sublimate, &c. &c. My patience was at last exhausted, and I determined not to bother myself any more with other people's directions, but to make the experiment whether they might not be literally scented out of their hiding places—I had seen it stated that particular plants were disagreeable to particular vermin; I first rubbed the bedstead with elder flowers, but to my cost the perverse inhabitants did not dislike the scent, for although I killed all I saw at the time, in two weeks after they were as numerous as ever.—Walking in the garden the same day, I accidentally touched a tomato vine, the smell of which is peculiary nauseous to me; the thought suddenly occured that it might be equally so to my enemies, the bugs. I immediately went to work, and had the bedstead thoroughly rubbed with the green vine. I have not since discovered any of my tormentors.—I cannot say whether they have at last died or absconded. I inform you of this, as I wish others would try if the tomato vine will always have the effect, I suppose it had in this case.

A FARMER'S WIFE.

THE FARMER.

BALTIMORE, FRIDAY, APRIL 26, 1822.

☞ It is earnestly requested that *every number* of this paper may be returned to the Editor which is not taken up by subscribers—and if any gentleman discontinue his name, he will of course fell it his duty to send back in good condition, such papers as may have been previously sent to him, in the confidence of his continued patronage.

☞ The members of the committee of arrangement for the next Maryland Cattle Show, to be held at the Maryland Tavern, on the Frederick Turnpike, on the last two days of May, are earnestly requested to meet at said tavern, at 12 o'clock on *Saturday next*, and at the same place at the same hour, on every succeeding Saturday, until the day of the Show. The object is for the adoption in season, of the measures, requisite for having the exhibition conducted in the most satisfactory manner.

PRICES CURRENT—CORRECTED WEEKLY.

Flour from the wagons, superfine, $6 25—Wharf do. $6 per bbl.—Wheat, white, 135 a 137 cts.—Red, 133 to 135—white, Corn, 80—yellow do. 73—Barley, 60—Rye, 70 to 75—Oats, 33 to 35—Whiskey, 31 cts.—Wool, 30 to 50—Beans, 130 cts. per bushel, wholesale—*Grass Seeds*, Clover seed, $7 50—Timothy, (scarce) $5—Orchard grass, 3 50—Herd grass, 3—Millet seed, 2—Salt, coarse, 54 to 65 cents—Liverpool ground, 50—do. fine, 40 to 44 per bushel—Plaster of Paris, ground, $7 per ton or 125 cents per bbl.—Mess Beef, $11—do Pork, 13—Herrings, No. 1, 3 15—Shad, 6 to 7 per bbl.—Codfish, 3 to 3½ cts.—Hams, 11—Cheese, 11—Butter, 20 to 25 per lb.—Eggs, 10 to 12 cents per doz.—Cotton, Georgia Upland, 15 to 17 cents per lb.—Louisiana or Alabama 18 to 20—Feathers, 40 cts. per lb.—Tar, 175 cts.—Turpentine, 175 to 200—Rosin, 150 per bbl.—Spirits of Turpentine, 45 to 50 cents—Varnish, 30—Linseed Oil, 75 to 80 per gallon—TOBACCO, Maryland, fine yellow, $25—other kinds of tobacco same as last report—Virginia Tobacco, 10 hhds. James River, good quality $7—Kentucky, no sales.

PUBLISHED BY JOHN S. SKINNER.

AGRICULTURE.

Agricultural Society.

The Anniversary Meeting of the Fredericksburg Agricultural Society, was held on the 9th Nov. 1821, at the Indian Queen tavern.

The following gentlemen were elected officers of the Society for the ensuing year:

James Garnett, *President.*
John Taliaferro, of Hagley, *Vice President.*
Robert S. Chew, *Treasurer.*
Wm. F. Gray, *Secretary.*
John T. Ford, *Assistant Secretary.*

COMMITTEE OF CORRESPONDENCE.

John Taliaferro, John W. Green, Enoch Mason, Garritt Minor, Wm. F. Gray.

COMMITTEE OF PREMIUMS.

George Hamilton, William Richardson, John W. Green, Enoch Mason, John Gray, John Pratt, Wm. Bernard, sen. Francis W. Taliaferro.

Several communications were read to the Society, and the subjoined Address delivered by the President.

A beautiful model of a Wheat Thrashing Machine was presented by the Rev. Thornton Stringfellow, of Fauquier county, for the $100 premium. Referred to the committee on premiums.

Among the various resolutions adopted by the meeting, we hail with pleasure the following, which lays the foundation for the introduction into this state of a practice which has long prevailed, not only in Great Britain but in the eastern states of this republic, and from which the most beneficial effects have resulted, both to the agricultural and manufacturing interests. We trust the work thus wisely begun, will be spiritedly per severed in, and that this time next year, we shall have the pleasure of publishing a cheering account of the Fredericksburg Agricultural Exhibition and Fair. But let the resolutions themselves speak the public spirited designs of the Society:

Resolved, That the members of this Society will individually contribute, and use their exertions to induce others to unite, in establishing an Annual Fair, to be held upon some convenient ground adjoining the town of Fredericksburg, on the second Wednesday of every year, and that the first Fair be held in November next.

Resolved, That the necessary expenses in fitting up stalls, and temporary enclosures for the exhibition of the stock during each day of the Fair, which shall last for *three* days, shall be defrayed out of the funds of this society.

Resolved, That the Annual Meeting of this Society shall hereafter be held on the second Wednesday in November of each year.

MR. GARNETT'S ADDRESS.

Gentlemen:

Although little has occurred within the range of my observation, since our last meeting, which you would probably deem worthy of your attention, I cannot suffer the occasion to pass without my customary Address; lest you should think I begin to relax in my humble efforts to promote our good cause. This cause, indeed, vitally connected as it is with the best interests of the nation, greatly needs a much more able advocate, than the man who now addresses you; but this consideration shall not discourage him from at least attempting to say, and to do all that he possibly can in its favour. Could it be left to contend only against unpropitious seasons, the exhausted state of our soil, and such other difficulties as necessity presents; I should not be without a powerful hope, that the increasing knowledge and skill of our agricultural brethren, under the blessing of an all-bountiful Providence, would be able so far to overcome these obstacles, as to render our occupation very lucrative. But when superadded to all these, we have the wrongheadedness and infatuation of real friends, combined with the pretended kindness of real, but disguised enemies to struggle with, I confess that this hope is nearly extinct. Contrary to the usual course of nature, experience in this particular, seems to bring us no wisdom. Day after day, and year after year, are full of testimony, as glaring as the light of a midsummer's sun, to convince all rational men how ruinous the policy has been, which we have for some time pursued, in relation both to agriculture and commerce. Yet the pertinacity with which the authors of this policy appear to hug their darling error, is in a duplicate ratio to its desolating influence. And all this under the fatuitous notion of consistency!!—as if the merit of perseverance was a thing entirely independent of the nature of its object. All our commercial cities have sorely felt the distressing effects of this most pernicious policy, but they have no where, it is said, assumed such an afflicting aspect, as in the town of Norfolk. Her grass-grown streets and deserted wharves, however, present themselves in vain, either to the feelings or understandings of gentlemen who dare not change their opinion, without committing the grievous political sin, of acknowledging themselves wrong. This once flourishing sea port therefore, possessing natural advantages for commerce equal to any town or city in the United States—the great mart in fact, during better days, for all the corn, and a large portion of the flour and tobacco made in the tide water section of Virginia; seems doomed to suffer on in hopeless desolation; and to diffuse a large portion of these sufferings throughout the whole country which formerly traded with her; for the sake of preserving the inestimable consistency of some half dozen public functionaries!!

Such language may possibly sound harsh and presumptuous in the ears of those who sit at their ease, unaffected by any of the circumstances which are grinding down the agricultural portion of our community to the very bran of their whole substance. But for these men to be very choice in the selection of set phrases, and complimentary expressions in which to utter their grievances, would be to kiss the rod that scourges them to the bone, and to worship the fatuity, which, if much longer continued, must consummate their ruin. Yet it seems not enough that we should suffer in silence the evils that have been inflicted upon us; we are also expected to adopt, by acclamation, the self-destructive arguments by which some of our own fraternity would fain persuade us that the much hackneyed phrases "public good" and "national industry," mean nothing more than the prosperity of our domestic manufactures, produced by taxes sufficiently heavy on all the rest of the community to secure to these manufacturers a monopoly of our supplies. We and our fellow sufferers the merchants, too, are considered exceedingly blind and ungrateful for not uniting to chaunt loud thanksgivings to certain self-created Apostles in political economy, who have most generously and gratuitously undertaken to teach us both our true interests, with little more knowledge of either, than that one means something about trade and "all that sort of thing;" and the other, something connected with the culture of the soil. This is really adding mockery to oppression; and to all such monitors we might well exclaim, in the language of the cabin boy who was drawn up to receive a lecture from the chaplain, as a precursor to the cat-o'-nine-tales.—"If you mean to preach me, preach me; if you mean to whip me, whip me; but for mercy sake don't whip me and preach me too." We, however, like well-broke wagon-horses, still pull at our load, although nearly immovable; and instead of balking until a part of the weight at least is taken off, we seem willing to bear the utmost burden that can be imposed upon us.

If, under such circumstances, we behold an evident diminution of agricultural enterprise; a manifest decline in agricultural effort; we should rather wonder that they are not much greater, than that we witness them at all. Agriculture can never flourish, unless influenced by the hope of profit, as well as the stimulus of necessity. But the last alone, one would think must be deemed by many of our politicians, preferable to both; especially when augmented in the ratio that it has been of late years. Taxes and debts must be paid, as long as there is a cent left; and the subtle contrivance of some of our statesmen to enable us to achieve these objects, is to increase the amount of what we have to pay, by the imposition of additional duties, at the same time that our means of paying our present burdens have been cut short more than half. Admirable system! Matchless powers of calculation!

I am well aware that it avails very little to repeat what has just been said, so long as the prevalent notion of political consistency exists in the minds of some of our public men; and so long as these gentlemen retain their present power to destroy both agriculture and commerce, by *regulating* (as they call it) the latter. Yet to recal your attention to the foregoing topicks, may possibly enable me—if it does no other good, to present to your minds with greater effect, the no longer avoidable alternative of still farther invigorating our application to our profession, and cultivating with increased assiduity our habits of economy; or turning spinners and weavers, together with our children, in some of the great manufacturing establishments, with which our country is to be overspread should the designs of some of our political optimists succeed to their full extent. A large portion of our posterity at least, will have no other choice, even on the supposition that we, their parents, may possibly escape. In the two professions of law and physic, the supply already greatly exceeds the demand; and if we turn our eyes towards commerce, we behold many merchants already bankrupt, and not a few navigators with vessels dismantled for want of employment.—Weavers and spinners therefore, we or our children must become, however reluctant; or continue as long as we can, to eat, drink, and wear, nearly all that we produce. Indeed, we have been already most earnestly and lovingly importuned to abandon, at least in part, the occupation to which we have been bred, for these new trades; by way of equalizing the supply and demand for agricultural products, by converting the producers thereof into consumers; which these gentlemen say is the easiest and best way in the world to diminish that enormous surplus of raw materials, with which our agriculturists are in danger of ruining the country.

In the scientific classification of the various diseases which afflict the bodies natural and politic, I know not whether the one which is vulgarly called "dying of the doctor," has yet been enumerated. But I am very sure that no one has a better claim to a conspicuous place in the catalogue; for none within any given period can exhibit more victims; and not one can be named wherein the recoveries which sometimes, but rarely occur, are oftener ascribed to the doctor's skill, when in fact, the irresistible power of nature, the vis medicatrix naturæ, has achieved the cure, contrary to all rational calculation. Reason would tell us, that when our veins, stomach and bowels have been exhausted of nearly all their contents, we must surely die; but nature occasionally says we shall not. That kind, beneficient heaven directed parent, still enables us to struggle on in spite of all the mistaken efforts to aid her, where she wants no aid; and is robbed by the empiric of her proper thanks for causing us to survive, when all human estimates, founded upon rational principles, preclude even the hope of life. If, under these circumstances, we so far escape as to be able to crawl about a little, and to exhibit for months and years a hue something between an ill-ripened pumpkin and smoke-stained wall, how often are we saluted with exclamations of surprise at the wendrous skill of our physician, instead of admiration at the extraordinary vigor of our natural constitutions in resisting a curative process that would have killed ninety-nine men out of an hundred. Precisely analagous to this is our present case in a political point of view.—Not all our legislative quackery in relation to commerce, has been able to prevent something like a rivival of it in certain very limited sections of our country; and this faint resustication, ascribable solely to the imperative wants of other nations, which our policy has not yet taught them how to supply within themselves; and to the irrepressible skill, industry and enterprise of our mercantile fellow citizens, is most fatuitously imputed by our gulls to the marvellous sagacity and ability of some of our political doctors; although, Sangrado-like, they still cry out—"more depletion," when their patient in fact, is in the last stage of atrophy.

I have said that our only choice, if we would not become spinners and weavers, is to apply with increased industry to our profession, and to become more economical. Let me now endeavor to point out some of the various modes in which this may be done to considerable advantage.—We all know that neither industry nor economy will avail much unless properly directed to proper objects; but the great art and difficulty consists in the selection of these objects, and in the application of means for their attainment. To apply these remarks to our own peculiar circumstances—we who live in the middle part of Virginia, generally believe, and I think with good reason, that wheat and corn should be our staple crops. But there is considerable diversity of opinion in regard to the best and cheapest mode of cultivating each.—Without adopting the notion, which in this wonder producing age would tempt us to believe, that corn may be made best, almost without working it at all; we may venture to assert, that there is still great room for economising both in the time and labour applied to this crop. From my own experience, as well as from that of certain friends on whose veracity and judgment I can entirely rely, I may pronounce it an established fact, that by using either skimmers, harrows, cultivators or scarifiers, (the two last which I think best,) nearly or quite one half the labour bestowed on corn where the plough only is used, may be saved. My present crop, which is the best I ever had notwithstanding the drought, has been made, principally, with only five furrows, since the planting, with the two-horse plough, and two strokes with the double harrow or cultivator.—This last implement is the common kind with three small trowel hoes, running twice between every two rows of corn. But these, as well as our harrows and scarifiers, admit of considerable improvement in their construction, by which still farther labour may be saved. Some excellent hints for this purpose, I think, may be taken from Gen. Beatson's pamphlet on agriculture. I should have added that my corn was generally twice worked with the hand hoe; which instrument, in the opinion of some, may be dispensed with altogether in the culture of this crop. On this point I have strong doubts; but have made no comparative experiment to test the notion. So far, however, I can venture to assert, that unless some straighter method of planting, than the usual one by hand, can be adopted; neither ploughs, harrows, cultivators, nor scarifiers—nor indeed any other implement, worked by horse-power, can kill and remove grass and weeds, as well as the hand-hoe. If this be true, more corn can certainly be made from the same land, in consequence of receiving the undivided support of the soil, by the additional labour of hand hoeing, than without it:—although another question would still remain; whether the additional quantity of corn would pay for the additional labour. To keep this crop clean from grass and weeds, at least during the growth of the plants, is absolutely necessary, in order to obtain the greatest quantity which the land is capable of yielding. And so thoroughly has this fact been proved by some of our most skilful corn makers, that in a particular section of our corn country, between the Rappahannock and Mattapony rivers, where the soil is light and sandy, they actually continue the culture of their corn crops, until the silks begin to die; nor are they deterred from this practice even by drought; but contend that this continued cultivation is still more beneficial in *dry seasons*, than in wet. If the general opinion is in favor of much less work for corn, may it not be more attributable to our natural indolence, and to the extraordinary vigour and productiveness of this plant, which will yield well in good land, in spite of the most slovenly culture: than to any facts deduced from experience? I offer this as nothing more than a query—knowing too well the force of that pride of opinion which rules as despotically over us agriculturists, as among any men upon earth, to venture upon any thing farther, on this point.

Another great saving in the process of corn-making, is to plant with a drill plough, instead of the hand; but to use this plough to the greatest advantage, requires that the land should be ploughed up in the fall or winter: by which the grass and weeds turned under, will be sufficiently rotted not to obstruct the drill, as they must, when the ploughing is postponed until the spring. Winter ploughing also secures superior tilth; and at the same time is the only effectual mode of killing garlic and the cut-worm; although it may be doubted whether the crop will be better in all lands, and under all circumstances, simply from the ploughing being executed at that season, rather than in the spring. Light lands, for example, having little or no cover, produce corn best (as many believe) when planted as soon as possible after ploughing. The best drill-plough which I have seen, is one improved from Martin's, by a Mr. Minor, of Hanover. In this, the hoe which opens the furrow, moves first; then follows a wheel, fixed in the middle of the same beam, and turning in a mortice somewhat longer than the wheel's diameter. Behind the wheel is the hopper and spout, through which the grain falls; and last of all, are two small irons, so fixed in the hinder ends of the beam, as to cover the grain, as soon as it drops. At the end of the axle of the wheel is a nut over which passes a band of leather or strong girting, which is preferable to an iron chain, from the superior facility with which any damage may be repaired. This band passes also over another nut at the end of the roller, which turns under, and partly within the hopper to receive the grain. The price, I understand, is only eight or ten dollars; and for simplicity and durability, I have seen nothing of the kind to equal it. Another recommendation is, that it is no patented implement, from the use of which we are excluded, except by paying considerably more than it is intrinsically worth. And here I beg leave to offer (although I know that I shall receive no thanks for it) a suggestion to all makers of patented agricultural implements.—This is, to calculate well, before they fix their prices, whether they would not make greater profits by selling at lower rates. I know a maker of cast-iron ploughs, for instance, who, although he has considerably reduced his prices, still receives at least twenty cents per pound for them, as I have ascertained by actually weighing, when common castings, the monopoly of which is not secured by patent, sell from 6 to 8 cents! This difference, I think, may well be called an exorbitant exaction: and to my certain knowledge it has prevented many farmers from using, notwithstanding they highly approve them. Now, although I would be one of the last men in the world to withhold liberal encouragement from useful inventions, yet I must say, that some of the authors of them appear to require other restraints than those which their own consciences, and our patent law afford. The exclusive right of selling for a long term of years, most disinterested men would deem nearly sufficient of itself to compensate for the time, trouble, and expense of all the patented inventions at present in use; but when superadded to this, an inventor is secured in the power of exacting 3, 4, and 500 per cent. and sometimes still more, for the labors of his brain; I should not wonder, if the business of going to bed, in order to conceive an invention (as is recorded of some of the most celebrated mechanicians) were to become more common, than almost any unpatented occupation which a man can possibly pursue. For although there certainly would be many miscarriages, yet as one lucky accouchment makes a man's fortune in a very short time, our present patent law has generated more inventors than probably can be found in any other country in the world. That any very useful discovery should enrich the man who makes it, I think all quite fair; but his riches should result, rather from the exclusive right of selling his invention, and the products thereof, than from his extravagant profits on the articles which he vends beyond what they would command, if he enjoyed no monopoly. But to return to our subject of economizing in all our agricultural pursuits.

Another great saving in the culture of corn may be made by ploughing oxen, instead of horses or mules, in situations where grass is abundant, and where no incurable distemper among cattle prevails. I know that it is a much controverted point, which are best under all circumstances: but with such limitations as I have stated, the fact I consider proved beyond further disputation. A gentleman of my acquaintance for two years had a mixed team of horses, mules and oxen. In each season his horses failed first, the mules next, although both fed upon grain and hay; and the oxen alone fed only upon hay and grass, finished the crop. I could mention several other proofs of their superior capacity for the plough in certain situations; but it is needless.—Of their superior cheapness, every body can judge who knows that the first cost of an ox is not half that of a horse; that he can be worked on good hay alone, longer than a horse; that if properly trained, he walks nearly or quite as fast; and that after he is almost past labor, he is worth more for the table than he was for the plough. I might add, as u farther proof, that they are universally used for farming purposes in the eastern states, where most matters in relation to practical economy are certainly as well understood as they are in any part of our country. Another great saving might be made in the feeding of our plough teams, (as well indeed, as of all stock fattened for the table,) the common method of giving corn in the ears being beyond all comparison the most wasteful that can be pursued. Yet, in this respect, most of us, I believe, still continue to sin against knowledge. And lastly, in securing the crop, the use of well constructed single horse tumbrels, instead of ox carts and wagons, although no where yet adopted in the southern country, would prove a saving of time such as no man can form an adequate idea of, who has not made the experiment.

(To be concluded in the next Number.)

* * *

To the honorable the Senate and House of Representatives of the United States in Congress assembled.

THE MEMORIAL

Of the Board of Manufactures of the Pennsylvania Society for the encouragement of American Manufactures, respectfully sheweth—

That we hope to make it appear, there are so many radical defects in the existing tariff, as to imperiously require a revision and correction, in order to reconcile it to sound policy and equal justice.

Our objections to it are principally of two kinds:—

I. That in this country of equal rights and equal freedom, it is marked by one feature, condemned by the unanimous voice of all wise statesmen, and by every principle of justice and policy, viz. it bears with enormous weight on the poorer classes of society, by exorbiant duties on necessaries of life, all of them universally, and some exclusively, used by those classes; whereas a great variety of articles, partly of luxury and partly of convenience, used exclusively by the middle and wealthy classes, are admitted at very low rates.

II. That notwithstanding the clamor raised against protecting duties on manufactures, as "taxing the many for the benefit of the few," the manufacturers have far less protection than the agriculturists. Whereas manufactures being generally of small bulk in proportion to their value—being therefore subject to light freights—and most of the very important ones being fabricated by machinery, of which the powers of production are almost boundless, they stand much more in need of governmental protection than the fruits of the earth, the great bulk and limited production of which present a bar against such enormous importations, as have taken place with respect to manufactures.

On the first point, we respectfully represent, that,

The price of Muscovado sugar, at the Havana, January 20, 1822, was $3 per 104lbs. The duty, 3 cents per lb. is about	*per cent.* 100
The Bohea tea imported into Philadelphia November, 1820, cost 10 and 11 cents per lb. The duty is 12 cents, which on the inferior kind, is	120
On the superior,	109
The duty on East India coffee is from	40 to 50
Salt at Liverpool, on the 2d of January 1822, cost 20 shillings sterling per ton, or about 11 cents per bushel. The duty is 20 cents, and therefore is equal to	180
Molasses at the Havana on the 20th of January 1822, cost 16 cents per gallon. The duty is 5 cents, equal to	31
It forms a most striking and revolting contrast to the above, that silks, satins, bombazines, bombazets, linens, and cambries, pay only a specific duty of	*per cent.* 15
Girandoles, chandeliers, china, cutlery, and hardware generally, pay	20
Superfine broad cloth, cashmere and merino shawls, chintzes, carpets and carpeting, pay	25

Thus it appears that—

$100 worth of Bohea tea,
66 do. of salt
120 do. of Musco. sugar,
380 do. of molasses,
260 do. of coffee,
} Pays $120 duty which is only the same amo'nt as is paid by
$480 worth of superfine broad cloths, cashmere and merino shawls, chintzes and carpets.
$600 of superb cutlery, china, girandoles, chandeliers, &c.
$800 worth of silks, satins, bombazets, cambries, linens, &c. &c.

We respectfully state, that we are pursuaded there is not, and never was, in the world, even under the most despotic governments, or in the most uncivilized nations, a system of revenue more unequal than the above.

On the second point, we observe, that we have been greatly concerned to find, during the intense distress and excessive ruin, which for years past spread among the manufacturers, whereby hundreds of capitalists, among whom were to be found many of our most valuable citizens, with large, and estimable families, were ruined—thousands of workmen bereft of employment—and millions of capital wholly sacrificed; that many of the farmers and planters arrayed themselves in opposition to the application of the sufferers for relief by an increase of duties, although the duties on all those articles interfering with the interests of agriculture, which are usually imported, are higher, and some of them twice as high as those imposed on manufactures. On this point we make no comment. We submit the facts to the consideration of an enlightened community, to pass on it such decision as it may be found to deserve.

Muscovado sugar, as already stated, pays a duty equivalent to	*per cent.* 100
Hemp is subject to a duty of 30 dollars per ton, which is equal to	27
Cotton pays three cents per pound, equal to	33 to 40
Cheese pays nine cents per pound, equal to On English,	40 to 50
Dutch,	90

To secure a market for the distillation of the grain and fruits of the farmers, and for their peach brandy, rye whiskey, &c. there are exorbiant duties imposed on foreign spirits—

On West India Rum	110 per cent.
Gin,	140
Bordeaux Brandy,	90

The entire consumption of the United States from the establishment of the government to the present time, with a very trifling exception, has been secured to the tobacco planters, by very high duties on snuff and manufactured tobacco, about 80, 90, or 100 per cent.

In order to guard against misconception, we wish most unequivocally not to be understood as disapproving of those or any other duties for the protection of our fellow citizens, engaged in the useful and honourable employment of cultivating the soil. Far from it. The system has our most decided approbation. Our object is to place the fatherly and fostering care bestowed on agriculture, in contrast with the exposed situation of manufactures.

After presenting to the view of your honourable bodies the above statement of the duties imposed obviously for the protection of agriculture, we respectfully request your most serious attention to the inadequate protection afforded by duties to manufactures.

Linen, and all other manufactures of flax, are subject to	*per cent.* 15
Hempen cloth, (except Russia and German linens, Russia and Holland duck,) cutlery, all kinds of hardware not enumerated, anvils, fire-arms, stone ware, pottery, earthenware, all manufactures of iron, steel, brass, lead, and tin, are subject to only	20
Manufactures of cotton and wool, (except those of the former below twenty-five cents per square yard,) are subject to	25
Leather, manufactures of leather and of wood, hats, caps, and a few very unimportant articles, are subject to	30

We confidently hope, that when this fair exhibit of the duties on manufactures is compared with those imposed for the protection of agriculture, it will excite universal astonishment, that an idea should have ever obtained belief, which is diametrically opposite to truth, that manufactures were exclusively protected—and that agriculture neither had nor required protection.

As this is a point of considerable importance, we wish to throw further light on it, and display more fully the inequality of the advantages enjoyed by the two classes of society.

	per cent.		*per cent.*
The duty on Muscovado sugar, we have seen, is equal to	100	The duty on linens or cambrics	15
Boxes, freight, &c.	50	Freight, and other charges, about	5
	150		20
		Duty on broadcloths, chintzes, &c.	25
		Freight, &c.	5
			30
Duty on cotton wool, averages	36	Duty on cotton and thread stockings, flax, oznaburgs, Brown Hollands, &c.	15
Freight, &c.	10	Freight, and other charges	5
	46		20
Duty on hemp	27	Duty on hemp oznaburgs	20
Expenses	27	Expenses	6
	44		26

We might pursue the contrast to a great extent—but we believe this is abundantly sufficient.

We further respectfully represent to your honourable bodies, that the highest ad valorem duty proposed by Mr. Baldwin's tariff, was only forty per cent.; that very few articles were subject to this duty; that manufactures of cotton, wool and iron, which comprise three fourths of our imports, were proposed to be dutied, the two first at thirty three per cent. and the last at twenty-five; and that the alledged danger of encouraging smuggling, by the adoption of that tariff, cannot be supported as an adequate reason for its rejection, while so many articles are subject to duties 50, 60, 70, 80, 100, and 200 per cent. higher.

That the alarm of the danger of extortion from monopoly, the consequence assumed from raising the duties as proposed in that tariff, is equally incapable of being maintained: as this point has been fairly tested and set to rest for ever, in the case of coarse cottons, which are subject to duties averaging 50 to 85 per cent. and actually prohibitory. The consequences have been highly salutary in various points of view. A market has been afforded for a very large quantity of the most important raw material of the United States, whereby a depreciation of the price in Europe has been prevented—employment has been given to thousands of our citizens, of whom many were in a state of pauperism—the poor rates in our cities have considerably diminished—house rents and mill-seats have risen in price—the internal trade of the country has greatly increased—and the manufactures thus protected, are better in quality, and more reasonable in price, than the rival articles formerly imported, but now excluded by prohibitory duties. Were it necessary we could add a variety of cases of other articles which afford full and complete proof of this theory.

That the accusation of extortion on the part of the manufacturers, during the late war which was the principal reason for the reduction of the rates of duties proposed by Mr. Dallas's tariff, was wholly unfounded—as the great rise of raw materials, of labor, and of sites for manufacturing establishments, would have warranted a greater rise of manufactures than actually took place—and the extraordinary rise in the price of the fruits of the earth, wheat, cotton, and tobacco, which have been often advanced forty, fifty, and one hundred per cent. in the course of one, two or three years, and likewise the enormous advances laid on imported goods, fully evince the inconsistency of the accusation of extortion preferred by so many of the cultivators of the soil and the merchants.

That the assertion so confidently promulgated, that "*the nations of Europe, in admiration of the success of our policy, are relaxing the rigor of their systems,*" is wholly destitute of foundation—as is proved, among other things, by the war of commercial regulations now actually waging between this country and the two greatest nations in Europe, France and England, which pertinaciously adhere to the most obnoxious restrictions, notwithstanding repeated efforts on the part of the United States to induce "a relaxation of their systems," by negotiation and by countervailing laws. And in no country whatever is there any proof of such relaxation. Moreover, "the success of our policy," for the last seven years, holds out nothing for other nations to imitate, but much to avoid.

That the immense wealth, power, and resources acquired by Great Britain, with a population of only about 14,000,000 of people, obviously by the restrictive system, whereby she keeps the national industry employed on the raw materials of their own soil, and on those collected from every quarter of the globe—trebling, quadrupling, and quintupling their original value—and likewise the present prosperous state of France, (notwithstanding all her sufferings during a twenty years' war, and her subsequent prostration under hostile armies,) resulting, in like manner, from the restrictive system, afford the strongest corroboration of its soundness that can be conceived.

That the distress and suffering which actually exists in Holland, together with the lamentable failure of her finances, in consequence of a system similar to, and enacted cotemporaneously with ours, whereby the national industry has been paralised, and the national manufactures prostrated, by immense importations of rival articles, satisfactorily prove, that manufactures require the constant fostering protection of government to guard them from the competition of foreign rivals; and that where they undergo a severe depression, all classes of society, as well as the national resources, suffer with them.

That to the experience of Holland, so full fraught with the most irresistible admonitions, may be added that of the United States after their two wars, which furnishes powerful additional proof of the pernicious consequences of exposing the manufacturing industry of a nation to the overwhelming competition of foreign rivals, possessed of all the pre-eminent advantages which improved machinery, consummate skill, immense capitals, and the aid of bounties and drawback at home, can afford. At the close of those wars, this country was in a highly prosperous state. Idleness was banished the land. Every man, woman, or child, able and willing to work was fully employed. Pauperism was in a great degree unknown. Happiness pervaded all ranks of society. But the cessation of war produced calamities which war had in vain attempted to inflict. Enormous importations took place, which glutted the markets, and bereft our citizens of a chance of sale, and of that reward to which industry has an indefeasible claim.—"Goods," to use a favorite phrase, "were imported cheaper than they could be manufactured at home." Ruin spread among our manufacturers. Thousands of the working classes of society, male and female, were bereft of employment and of the means of supporting themselves and their helpless children; devoted to idleness and pauperism; and exposed to the lures of vice and crime. The productions of the country were entirely inadequate to pay for the enormous amount of foreign luxuries calculated to demoralize us, or conveniences and necessaries, most part of which we could ourselves have supplied. To discharge the balance exhausted the metalic medium of the nation, which spread a paralysis throughout all the operations of society, and produced that distrees which engendered tender and appraisement laws, and all those unhappy measures, to which embarrassed communities are so often driven. Commerce, which had been an efficient agent in producing these scenes, partook in both cases of the ruin which it had produced. Agriculture, by a few years of this ruinous system, has lost nearly all the advantages it derived from an uninterrupted course of prosperity for nearly twenty years. And our finances, to which the attention of many of our statesmen appeared exclusively directed, and of which the lasting prosperity was predicted with unlimited confidence, have failed, with the general impoverishment of the nation—an impoverishment which is as certain a consequence of the sacrifice of domestic to foreign industry, as heat is the consequence of fire—or light that of the presence of the sun in his meredian splendor.

That we have beheld with satisfaction the fostering care bestowed on commerce from the organization of the government to the present time whereby the tonnage of the United States was elevated in a few years to the second rank among the nations of the earth; the coasting trade secured by prohibitions under penalty of confiscation of any foreign vessels interfering in it; such a discrimination in tonnage and light money as affords American vessels a decided advantage over foreign rivals; the prohibition of the entry of foreign vessels from ports into which our vessels are not admitted; a difference in the duties on all imported teas, except Bohea, amounting to nearly forty per cent. in favour of American vessels—in one word, the adoption of every practicable measure that could be devised to protect and promote commerce. And yet too many of the merchants, enjoying these transcendant advantages, whenever any attempt has been made to afford relief or protection to manufactarers, have exerted all their efforts to prevent its succes.

That past experience forbids us to place dependence on a continuance of the present intermission of the public suffering, so long and so severely felt—an intermission, let it be observed, far from universal—as it does not extend to the three great western states, Ohio, Kentucky, and Tennessee—nor to the interior part of Pennsylvania and New-York—embracing, together, about a fifth part of the population of the Union. There are strong appearances of at least a partial return of the scenes we have lately beheld;—for, like causes producing like effects, the great importations recently made, and still expected, can scarcely fail to have a similar effect with those of 1815 and 1816, though probably less extensive and oppressive in their operation. Nothing can secure this country from periodical returns of those scenes of distress, whose fatal traces, like those of hurricanes and tempests, are to be found indelibly marked throughout our country, but a protection of manufacturing industry equal to that bestowed on commerce and agriculture.

Your memorialists, therefore, respectfully pray you would take the premises into your serious consideration, and adopt such measures as you may judge adapted to promote the wealth, power, and resources of the United States, and give them that stand among the nations of the earth to which the transcendent advantages they enjoy, natural, moral, and physical, give them so fair a claim.

Philadelphia, Feb. 20, 1822.
Signed by order,
WILLIAM TILGHMAN,
President Pennsylvania Society for the Encouragement of Manufactures.
Attest, Mark Richards, Sec'y.

* * *

TO THE EDITOR OF THE AMERICAN FARMER.

If the Editor of this excellent paper which we have often recommended to the patronage of our readers, would endeavour to call the attention of his correspondents and that of the intelligent Farming interest generally to an inquiry into the causes of what is called "*the sedging of wheat*," (a term made use of to describe the diseased state and decline of wheat before it begins to joint, which is marked by its first ceasing to grow and then withering away, or growing up in a little bunch like narrow flags and producing nothing,) he would probably render an essential service to the cause of Agriculture.

Our Farmers complain much of this evil the present year—it has appeared in a great deal of the best land, and we believe we are correct in saying it more commonly appears on light loamy soils than on stiff lands. We are apprehensive this evil is increasing very much.

To find out the cause and the cure of this destructive malady is a most important concern.

Editor Easton Gazette.

The Editor trusts it is unnecessary for him to say how much he should be pleased, to receive and disseminate observations on the subject adverted to above—which would enable the cultivators of the "staff of life," to arrest an increasing evil. He thinks he has seen, in the memoirs of the Philadelphia Agricultural Society, or elsewhere some remarks on the subject, but whether remedial or merely descriptive of the disease, and declaratory of its existence, he does not recollect. He solicits to this enquiry, the particular attention of his correspondents, to whom he ought to embrace all occasions to tender his acknowledgements —*Edit. Am. Farmer.*

Extracts from the last file of the London Farmer's Journal, received at the office of the American Farmer.

ON THE CULTIVATION OF TARES.

Holly Hill, near Titchfield, Hants,
Oct. 31, 1821.

Sir,

Observing in the Farmer's Journal of Oct. 29, an answer to the inquiries of a correspondent on the mode of raising and using Tares, I send you the following remarks, which may perhaps afford some useful hints to those of your readers who are not in the habit of introducing this valuable plant into their rotation of crops. The spring and winter tare are of a distinct species; the latter comes into blossom soonest, and bears the severest weather uninjured, whereas the former will not stand the cold of winter. On a farm of 300 acres (whereof two thirds are in tillage,) I sow annually about 30 acres on part of my wheat stubbles, or after my early potatoes, and I find them of great benefit to any sort of stock that I kee . My plan is to break up the stubbles as soon as possible after harvest, and to put in the tares with one ploughing, either drilling them, or sowing broadcast, after an implement called *a presser*, which throws the land into ridges, and causes the grain to fall into the regular furrows prepared for it. I begin to sow in September, and continue to do so, at the intervals of a fortnight, till the end of October. I use about two bushels of seed to the acre, and sometimes mix a little light wheat with it, which I find of use in supporting the tares whilst growing. The sowing of the spring crop commences in February, and may be continued, to May or June, by which means a constant succession of excellent green food will be provided. I seed off as many acres of tares as possible with my sheep (commencing as soon as the first flower shews itself,) and reserve the rest for my horses, my milch cows, (which are soiled in a yard all the year,) and my pigs. For the latter animals and for horses, they are a most nutritious food in the autumn, when they are podded and full of seed. On the land where the tares have been fed off, I immediately put in drilled turnips (without any other manure than what the sheep have dropped,) or transplanted Swedes, or transplanted mangel wurtzel. It is also very good husbandry to put in a crop of spring tares after the winter ones, on the land intended for wheat.—Where the clover has been killed during the winter, spring tares may be put in about February with great advantage. I this year sowed in that month about 15 acres of spring tares on land where the clover had perished, and on the produce I kept 650 sheep 20 days, besides supporting 10 horses during the same time; 7 milch cows 14 days, and about 100 store pigs two months. About twelve acres of the land were cleared of the tares in time for turnips, which are now a good crop. These I could have off in time for sowing wheat this year, but I shall let them stand through the winter, and put in a crop of carrots instead, in March or April. I did not plough the land for spring tares after the clover; I only scarified it once, and immediately drilled in the seed. The scarifier and drill are the same implement, only altered a little for their different operations; they each work at the rate of six acres per day, the former with four, and the latter with two horses and perform extremely well. I had therefore very little expense in tillage and sowing. A field of five acres, which in September, 1820, I sowed with winter tares, was forward enough, in the spring of this year, to receive my ewes and lambs on the 27th of April. I passed the flock rapidly over the first time, and did not eat them closer; but they kept 24 ewes and lambs six days; and 235 ewes, 206 lambs, and 28 dry ewes. eight days; and afterwards, at the second feeding, which began on the 20th of June, they supported 458 sheep one day, 637 sheep four days, and 186 sheep one day. On that field I have now an excellent crop of transplanted Swedes, which were put in as soon as the tares were finished. On the whole, I consider tares as one of the most profitable of the green summer crops; and I hope that the statements I have given above will convince other persons of their great utility.

I remain your obedient servant,

VARRO.

☞ We shall be happy at all times to hear from this correspondent.—*Edit. Farm. Jour.*

TO GRASS FARMERS.

Hants, Nov. 1, 1821.

Sir,

Being partial to sheep stock preferably to that of larger cattle, a considerable part of my lands being rather in a strong soil, and subject to poach in winter, and in moist seasons, some difficulties have arisen in my mind, formed upon calculations of the relative consumption of stock, which I wish to submit to some of your best informed correspondents, who may possibly solve my doubts on the subject. It must be an exceedingly productive acre of the best meadow grass that will produce one ton and a half of hay and a ton of rowen or aftermath, in the whole two tons and a half. Supposing the grass or green produce to have sunk one third in weight upon being dried and made into hay, the whole green produce would be within a fraction of 7332 lbs. Now, supposing every sheep of the middling average size to consume 6 lbs. of green produce daily, and that would appear a very scanty allowance, each sheep would consume 2190 lbs. of that produce—less than 3½ sheep throughout the year upon the very best meadow. Now, suppose the average of a grass farm produces one moiety of the best meadow, and that is rather a large average calculation, then a moiety of that stock would suffice for the consumption of the whole, or 1¾ sheep per acre. Supposing again the average produce of a sheep to be 15s. which I consider as a large allowance, and certainly rather more than the actual profit, the whole amount per annum would be £1. 6s. 3d.; this would be the whole gross produce. Deduct from which, interest of capital, tithes, poor-rates, expense of shepherds, accidents, &c. &c., the whole would be more than swallowed up, and nothing left for rent. If these calculations are verified, it would clearly appear that such stock, reported the most profitable of any, on grass lands, would be worse than none at all, leaving the farmer without profit, and the landlord without rent. I confess I suspect some error in these calculations, or farmers would never have ventured to encourage this stock preferably to all others as considering it the most profitable. In a mixed farm, consisting partly of arable and partly of meadow and pasture, aided by sufficient crops of turnips, sheep may not only be useful but necessary: but in a farm wholly laid down to grass, I fear it is impossible to render the stock productive to any beneficial amount, should the above calculations prove tolerably correct, and the reasonings deduced from them valid. The opinions of some of your numerous and intelligent correspondents on the subject will greatly oblige, Sir, your very obedient servant,

A. B.

P. S. The above calculations are supposed to be correct, subject to a small fraction.

ON SOWING TURNIPS EARLY FOR SOILING.

Edinburgh, Oct. 24, 1821.

Sir,

The result of an experiment made by that indefatigable and enlightened agriculturist, J. C. Curwen, Esq. M. P., Workington, deserves to be made known to the whole of the farming world. The great difficulties which Mr. Curwen had experienced in the soiling of his cattle during the latter part of the season, determined him to sow his turnips much earlier than on any former occasion, for the purpose of supplying the deficiency of green food during the latter part of August, September, &c. With this view, he sowed the yellow, white, and green turnips, during the two first weeks in May, and his crop is, without exception, not only the best in his own neighbourhood, but is not surpassed in any part, either of the north of England or of Scotland. On the 18th of August his turnips weighed 22½ tons; and on the 30th of August they were 30 tons on superior soil, and raised with manure; and on the 2d September they weighed 32 tons. On the 10th September, his turnips raised with bones, sown a week later than the former, weighed 22½ tons, and those raised with a kind of manure from London, 20 tons, 16 stones, whilst the common town ashes produced a crop of 27 tons. On the 28th September they weighed 36 tons; and on the 7th October, the green globe weighed upwards of 40 tons. The great advantage derived from this system is, that those who soil are not under the necessity of cutting their clover crops a second time, which not only very much deteriorates the soil, but in some instances, as was the case frequently this season, it hardly repays the expense of cutting. It is very possible, in good seasons, to have the turnips ready for drawing in the end of July, since during this most unfavorable of all seasons they have been ready in August. If Mr. Curwen had not adopted this plan during this season, he could not possibly have continued to soil his 100 head of very valuable short-horned cattle at the most critical period of the year. In average years, one acre of clover, at the second cutting, may be estimated at five tons, so that one acre of turnips is equal to five of clover. Twelve acres of the second cutting of clover this year, would scarcely have produced 30 tons of grass. The expenses of cutting and securing the clover would vary in different situations; but the great advantage derived from turnips, and their comparative cheapness, must be manifest to all; since if clover be given in a succulent state to milch cows, the quantity consumed of turnips and clover is nearly the same. If clover be given in a state not sufficiently succulent, a great loss of milk must always be expected. Besides all these advantages, less injury is invariably sustained by the good ground in case of pasturage, than when cut for soiling a second time. In favorable years, Mr. Curwen's stock of cattle will be supplied with turnips during nearly 46 weeks, and thus he will only find it necessary to supply the deficiency of six weeks with clover, vetches, &c. It ought also to be remembered, that the period for cutting the second crop of clover is very important, being in general the time of harvest. Mr. Curwen finds that one acre of turnips will support a hundred head of cattle,* which affords a clear proof of the great superiority of turnips over clover, when used for soiling in the latter part of the year.

In my next, you may expect a more accurate view of the state of the crops in Scotland; and some remarks on Mr. Curwen's plan of improving wastes. Your's, &c. F. SIBSON.

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* *Our correspondent probably meant to add* a week, *which is about a hundred weight* per diem *to each.*—Edit. Farm. Jour.

☞ We have the pleasure of adding to the above, an extract of a letter recently received from Mr. Curwen, wherein he says, "I this year sowed my white globe, and the yellow turnips, the first week in May, and began to pull them the 20th of August, weighing then 24 tons, and before the end of the month 27 to 30 ditto. By these means I can feed more than nine months on turnips, &c. The difficulty of procuring food for soiling, in April and September, is by these means removed." In another paragraph he says,—"If straw and turnips will not fatten cattle, there is little profit to be expected. I have for some years reared and fed my stock in sheds on green food, and I find no difficulty in bringing my three-years-old steers to 80 stone of carcass (14 lbs.)—I steam the chaff of grain, which I give them with salt; this keeps them in good health of body, and I never give them corn, cake, or hay." It would be a great pleasure and satisfaction to us to be informed, what may be the expense per head in fuel and labour.—*Edit. Farm. Jour.*

ON THE RED WATER.

Kelmarsh, Oct. 30, 1821.

Sir,—Observing in your Journal of yesterday the Query of *Rusticus*, I beg to refer him to that truly valuable work, entitled "Every Man his own Cattle Doctor," by Mr. Clater; he will there find the disorder, called Red Water, concisely, but clearly and satisfactorily explained, together with the cure, or rather, perhaps, I should say, the prevention of this destructive malady. I shall however, subjoin the recipe for the use of those who may not like to purchase the work, of the efficacy of which I can speak with confidence, after repeated trials. Take Epsom salts six ounces, nitre in powder four ounces, boiling water three pints, which pour upon the salts. When new milk warm, add spirits of turpentine four ounces, bole armoniac in powder half an ounce; mix well, the dose from three to four table spoonsful, and the above about sufficient for 30 sheep. Mr. Clater recommends that the sheep be fasted two hours before and after the drink is given; and in order to perform the business expeditiously, if several require the medicine, a small horn should be provided, holding the proper quantity. I have sustained some loss this year, as I suppose, through the luxuriance of the Swedish turnip tops, though changing from superior to good grass keeping will often cause the disorder, which for the most part attacks the best sheep, not one, however, out of 240, has died since I gave the drink. During the time of giving the medicine it should be constantly stirred.

WM. THORPE.

☞ We thank this gentleman for the ready answer to the Querist, and are happy to find, by his description of the disease, that he is accurate in his notion of its identity; no benefit, however, is to be expected from the astringent earth (bole armoniac) in the foregoing recipe.

We learn by perusing Ellis's *Gentlemen and Shepherd's Guide*, that *Red Water* was the name then generally given to the disease attended with *bloody urine*, and the reply of Mr. Thorpe shews, that this is the case at present: the name is certainly a very proper one, although this disease, is called the *resp* in the fens and marshes, and another disease, of which sheep die more suddenly, though not in such numbers, nor on the same sort of keeping, is called the *Red Water*.—This latter is probably the same which the Scotch call the *braxey*, and if this can be ascertained, it will be well for us to adopt the Scotch name for this sort of mortal sickness. We should be happy to learn from any experienced correspondent in Scotland, *what are the symptoms?* What the season? What the *keeping* and other circumstances (as the age of the sheep, &c.) of, at, and on which sheep die of the *braxey?* We find by the explanation of Hogg (the Ettrick shepherd,) that there are several species of this disease, or what is more likely, several diseases called by this name. That which he calls the *water-braxey*, answers by his description to our red-water, or resp (bloody urine). Another species of this, called the *yellow sickness*, he mentions as *a rare distemper*, but by the symptoms it is the *bloody urine*, only attended with some peculiarities of appearance, owing to the different state of body, period of continuance, or time of examination after death.

It has long been our intention to enter at some length into this subject, with a view to divide and distinguish the diseases of sheep which cause speedy or sudden death, because no subject relating to stock is so much neglected, or so little understood.—*Edit. Farmer's Jour.*

ON PLANTING POTATOES.

Gargreave, Kirkby, Lancashire,
October 15, 1821.

Sir,

From some little knowledge which I possess of the physiology of the plant *Solanum Tuberosum* or *common Potato*, as well as from frequently reading accounts of the superior productiveness from whole potatoes, induced me, this season, (early in May) to plant a row and a half through a two-acre field of 158 yards in length, at one yard between and 15 inches in the row, with large whole ones; and getting them up myself a few days ago, the produce was 20 bushels, 75 pounds to the bushel, which is equal to 408 bushels and a half per statute acre. I also took up three rows, planted at the same time with sets, at 27 inches between and ten in the row, which produced 22 bushels and one third, nearly 305 to the acre.—The potatoes, were subsequently treated alike, with the exception of raking in the dung, in the first case, into the furrows on each side of the potatoes, though no more was originally spread upon the ground; but it was long and could not be well turned down otherwise. The method of planting potatoes in the northern part of this county, where large quantities are annually grown, being the chief food of the labouring classes, is to put them into furrows, raking in the dung, and covering them with the succeeding furrow upon a flat surface, planting in every third furrow, and not in the ridge or turnip system. The first method I consider better, unless upon heavy, retentive soils, imperfectly under-drained, as the common harrow, on the first appearance of the plants, will more effectually extirpate the weeds and a greater quantity of fresh mould may be brought up to the stems; two very important processes. Every person who communicates his observations to the public, should sedulously endeavor not to deceive; and upon that principle, I have to observe, that those potatoes which elongate their bulb fibres to a distance from the root, are the best to plant whole, which are characteristic generally of those with white flowers, and of great increase. Those which form almost immediately from the stem, are improper, as they occupy too little space in the ground, and mutually prevent each others' growth.

Should you conceive this worthy of insertion in your valuable miscellany, you may do so, as it will strike the minds of the readers through a different medium to a verbal communication, and in some measure, perhaps assist to dissipate the prejudice against the planting of whole potatoes, from fear of a great quantity of seed being necessary.

I am, Sir,
Your obedient servant,
ROGER POSTLETHWAITE.

ON THE QUARTER EVIL.

Sir,

The Quarter Evil generally appears after a series of dry weather in the end of autumn, or a long succession of the calm frosty days in winter. Even in summer, calves are liable to this fatal distemper, if the juices in their pastures have been highly concentrated by intense heats. Unequivocal signs of putridity are manifest in the carcasses of animals that die of the Quarter Evil; but one quarter is peculiarly affected, and if the disease lodges in a fore quarter, the danger is greatest, because the neck is tainted, and from thence to the lungs. As the progress of malady is so rapid, whenever it appears, all the cattle, except milk cows, should be bled, and medicine given by way of antidote. The instrument employed in bleeding must be specially cleaned with warm water, and dried between each operation, since the least tincture of blood from a diseased subject would convey putrescency to a sound animal. One of the most decided indications of the Quarter Evil, is a tension of the skin, which like a dry hide, rattles if we attempt to handle it. All the cattle should be minutely examined, in case they require friction with a hard brush, to remove this symptom. After rubbing, let them be driven into the sea, or into a river, lake, or pond, and when they have swam about ten minutes or a quarter of an hour, give them quick motion on land; and it is hardly needful to suggest, that the quantity of friction, exercise, and medicine, must be according to the age and vigor of each animal. Our prescription is adapted for calves three months old; and no remedy should be used for an hour at least before and after the calf has had milk, either from a dish, or by suction from the mother. Indeed, it is indispensable so to divide the time for each application, that regular intervals of rest may be allowed; and such prescription must be repeated three or four times daily: but in winter, or chilly days of a milder season, it would be improper to give a cold bath, therefore the cattle must have more exercise on land. The drink for cattle in hot weather should be whitened with barley meal; and for medicine, an English pint of warm water, whitened with barley meal, is to be employed to dissolve two tea spoonfulls of saltpetre grossly powdered; to which add a wine-glass full of a strong infusion prepared from wormwood, or rue, sage, angelica, or juniper berries. As juniper berries contain much camphor, they are preferable, and should be well bruised before the boiling water is poured over them.—Immediately before the dose is administered, mix with it two tea spoonfulls of vinegar; put the dose into a bottle, and pour it into the throat of the calf. If herbs, or juniper berries, for the infusion, cannot be speedily procured, two ounces of the best gunpowder, mixed with warm water and barley meal, will supply the place of these, and of saltpetre, until they can be obtained.

FOR THE AMERICAN FARMER.

EASTMAN'S CYLINDER STRAW CUTTER.

January 29th, 1822.

Sir,

I presume you are quite impatient to hear from me, respecting your *cylinder* straw cutter: I should have written to you sooner, but wished to be perfectly satisfied, that the machine would answer the purpose it is intended for. Five months trial has convinced me that this straw cutter far surpasses any that has been offered to the public. I have taken the knives off, ground them and put them on without any difficulty. I have cut about 2500 bushels of straw and find that the knives bear on the steel as hard now as the day I took it from your shop; to sum the whole together the machine is simple in its construction, substantially strong, and easily kept in order, and will cut, of good straw, 50 bushels per hour with ease; no person I think who wants a straw cutter, will purchase any but yours. I am Your's,

THOMAS DUER.

Mr. Jonathan Eastman.

Mr. Jonathan S. Eastman,

Sir—I am so well pleased with the operation of the cylinder straw cutter (for chaffing all kind of long forage,) purchased of you last November, for the use of Orange Farm, near this city, belonging to Robert Smith, esq. that I now transmit to you the result of my experiments. Previous to the purchase of your machine, Mr. Smith requested me to send for two machines, (say Eastman's patent, and Barnard's Patent,) and make a fair trial, and the one that answered the best purpose, he would purchase for the use of the farm, as he was determined to have every description of long forage chaffed. The two machines were procured, and brought to the farm on the same day. Barnard's patent had a fair trial but would not answer the purpose at all; but whether owing to the principle of the machine, or bad workmanship, I will not pretend to say. Yours, (Eastman's Patent) had also a fair trial and really surpassed my expectations, and has been in operation ever since, (upwards of two months) cutting all the long forage of every kind, that has been fed to upwards of seventy head of stock; during this time the knives have been taken off but once, and then ground on the farm, and reset to the machine. Two hands with this machine, will readily cut from sixty to seventy bushels per hour. I have no hesitation in saying, it is far superior to any machine I have ever seen for the same purpose; and it is my decided opinion, that at least one half of all kinds of forage, is saved by cutting and steaming it.

Respectfully yours,
N. UNDERWOOD,
Manager for R. Smith, Esq. at Orange Farm.
February 7th, 1822.

ALDERNEY CATTLE.

Hampton, June 1st, 1819.

Miss Eve Igau requests to inform you that she had the cream from the English (Alderney) Cow, from Friday evening last, churned to-day, (3 days) from which she had 3¾ lbs. butter, and also the cream from *two* of the others picked out for the best milch cows, churned, which produced 4¼ lbs.; they were all in the same pasture, and milked in the sheep pens, for the same length of time.

I am, Sir, respectfully,
Your very obedient servant,
JOHN HENRY.

Genl. Ridgely.

The above note from a person employed at Hampton, to the hospitable proprietor of that splendid estate, relates to a comparison which he ordered to be made between the Alderney cow and two of his best cows. It will be observed that it is not stated as the *greatest quantity* that either might have given, under more favorable circumstances. It is not adduced as an example of *great yield*, but as a fair comparison between the richness of the milk of an Alderney and that of two other cows, considered the best in a herd where all have been reckoned very fine, and where the three were pastured and managed in the same way. There is undoubtedly in this breed some peculiar constitutional tendency which fits it exclusively for the pail—or rather for the *churn*. When the cow has brought her calf, she seems to yield up every thing to its support—the lactescent secretions predominate over all others, and the extraordinary richness of the milk, is as *visible to the eye*, as it is perceivable in the result, after churning. They are remarkable for their resemblance to the deer—would be avoided by a stranger purchasing milch cows, by *the eye*, and for the shambles or the yoke, are not to be recommended.

Edit. Am. Farm.

THE FARMER.

BALTIMORE, FRIDAY, MAY 3, 1822.

☞ In publishing discussions on the great question of governmental protection to Domestic Industry, some rule must be laid down, lest in the interest excited by the importance of the subject, and the very opposite opinions entertained upon it, we should be called upon to appropriate to the discussion, a greater proportion of this journal than could be yielded to it, having a just regard to other topicks. It is already known that our *first* wish is to communicate the *experience* of the sun-browned practical Farmer, in preference to the fine spun lucubrations of the Philosopher, or the calculations, however profound, of the political œconomist. Yet it cannot be disputed, and we must not forget, that the plough works most efficiently when industry takes the handles and science hangs her lamp upon the beam. This number, it will be seen contains a memorial in relation to the existing tariff, and we give it place as we have done those from the united Agricultural Societies of Virginia. It appears on reflection, that as societies have been organised to guard the interests of these two classes, that the better course will be to select for our readers, the expositions made by them, without admitting in reply the essays of anonymous commentators, without number. If an individual appear, under his proper name, let him be answered in the same way; but we should prefer, now that societies are organised to concentrate and express the opinions and views of these interests respectively; that our readers would feel satisfied with the representations emanating from them. If we have taken a wrong view of the subject we are open to conviction.

SEED SENT TO THE EDITOR SINCE LAST NOTICE.

Indian Corn and Nutmeg Seed—from Edmund Ruffin....Remarks.

"I have filled in the interstices in the box between the different parcels of earth, with some of my *crossed* corn. It retains enough of the flintiness and early maturity of one of the parent stocks and yet has 22 rows on all prime ears, and a greater depth of grain than any equally hard corn. I find, however, that its produce shews a continual effort to run back into one or the other varieties from which it is made, and not one ear in ten is fit to be selected for seed. I believe that all new varieties produced by crossing, require many generations to become fixed in their characters. Some nutmeg seed are also sent—if *fashion* would permit, their *taste* would well admit their stopping all further importations of that spice."

Swedish Coffee—from Geo. Cox, of Charleston, S. C....Remarks thereon.

"I enclose you a few seeds of the Swedish Coffee. It is grown in Sweden for the express purpose—it is a hardy plant and requires to be sown in drills about 18 inches apart, but rather thin. I grew a small quantity in my garden last year, and it produced a great abundance. If people would become acquainted with this grain and approve it, it would become a valuable thing to this country."

PRICES CURRENT—CORRECTED WEEKLY.

Flour from the wagons, superfine, $6 87½ to $7—Wharf do. free from garlic $6 62½ to $6 75. Wheat, white, 143 a 145 cts.—Red, 138 to 145—Corn, white, 83 to 85—yellow do. 74 to 76—Rye 80 cts.—Barley, 55 to 60—Oats, wharf, 35 to 40. One parcel of White Wheat, raised by J. P. Paca, Esq and fit for family flour, sold for $1 46.—Very little Red Wheat sold as high as $1 43, and it is flat to day (Wednesday) at $1 40.—Whiskey, 31 cts.—Wool, 30 to 50—Beans, N. E. 130 per bush. wholesale—*Grass Seeds*, same as last report.—Salt, coarse, 54 to 65 cents—Liverpool ground, 50 do.—fine, 40 to 44 per bushel—Plaster of Paris, ground, $7 per ton or 125 cents per bbl.—Mess Beef, $11—do Pork, 13—Shad No. 1, trimmed, $7—Do. do. No. 2, $6 50—No. 1, untrimmed, $6—No. 2, do. do. $5—Herrings, No. 1, 2 50 to 2 37½p. bbl.—No. 2, do. $2 to $2 25—Eggs, 12½ cents per doz.—Butter 31 to 37½ per lb.—Common fowls, per pair 75 cts.—Beef, prime pieces, 8 to 10 cts.—Live Cattle, $5 to $6.—Other articles same as last report.

☞ Some hogsheads of very superior tobacco have been sold lately for $25 per hundred.—One made by Judge Dorsey sold, we understand for $26; and it has been asserted that one brought to market by Mr. Montgomery, of Montgomery County in this State, sold for $28 the hundred—We have procured a few bundles, that we might inclose small pieces to some of our friends, to let them see *what it really is* that commands this extraordinary price. We should be glad in cases of this sort to learn from the growers of the article, any peculiarity which may have existed as to the soil—time of planting, kind of tobacco—management, &c. &c.

Wheatland For Sale.

Wishing to remove to a city, for the benefit of my children, I offer this fine estate for sale.

Wheatland is situated in the fertile county of Jefferson, in Virginia, 4½ miles from Charlestown, and a less distance from the celebrated Shannondale Springs, 55 miles from Washington, and 75 from Baltimore. It contains about 950 acres of first rate limestone land, in the highest state of cultivation; one third in Wood. The water is extremely fine, and the place remarkably healthy. All the buildings are in complete order, and are ample for every purpose either of comfort or necessity, and are chiefly constructed of stone. The stone dwelling-house is spacious and singularly convenient in the arrangement of its apartments, containing 14 rooms. The large and convenient barn, (60 feet by 40,) is also built of stone. The fences and enclosures are all in the best state of repair; they are constructed of the most durable materials, a considerable portion being of stone.

A more particular description is deemed superfluous at this time as it is presumed that persons wishing to purchase, would view the property, and the proprietor will promptly answer any inquiry by post.

I will remark however, that I believe it to be the best, and, (at the price I am willing to take for it,) the cheapest estate that has at any time been offered for sale in Virginia, or elsewhere.

The payments (being well secured,) will be made perfectly to correspond with the wishes and convenience of a purchaser.

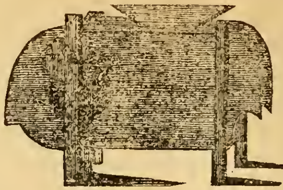
The farm will divide advantageously into two or three sections, and will be sold entire or divided to suit purchasers.

About 65 or 70 valuable NEGROES, with the Stocks, and every other description of property attached to the Farm, will be included in the sale, at the option of the purchaser.

HENRY S. TURNER.

For a more minute, and as we are quite confident, a just description of the above most valuable estate, the reader is referred to vol. 2, page 401 of this Journal.—*Edit. Am. Farm.*

SIGN OF WHEAT FAN.



On Ellicott and Light streets, near Pratt st. wharf.

The subscriber having provided himself with good workmen, will make, and sell on the most reasonable terms

WHEAT FANS AND STRAW CUTTERS, assorted

ROOT-CUTTERS, a very useful machine

WIRE SAFES and SIEVES, various kinds

And SMITHS' BELLOWS,

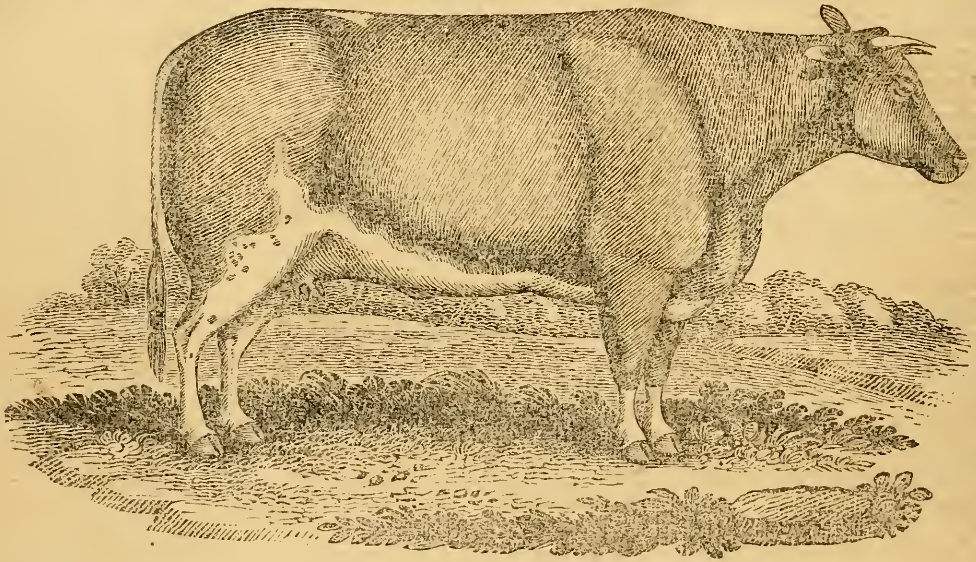
Wire wove to order for Window Frames, or other purposes.

J. GRAFFLIN.

N. B. Wheat Fans and Smiths' Bellows repaired.

A Gentleman and Lady

Who has conducted a Seminary in Baltimore for the last four years, wish to remove to a healthy situation in the country, and open an Academy for *both sexes;* any information of a suitable neighbourhood, either by message or letter, left at the office of E. H. Cummins, Esq. Tammany-street, will be thankfully acknowledged. A *farm* in a populous neighbourhood, would be preferred as a residence.



PRINT OF CHERRY,

A Teeswater Heifer, by George, the Sire of the celebrated Bull BERGAMI.

THE FOLLOWING ANIMALS OF TEESWATER BLOOD, *ARE FOR SALE.*

NELL, a very deep milker of three years, with remarkable points, from Countess by Bonaparte, price $120.

COUNTESS, the dam of Nell, a very large cow of six years, with great points—her pins are 25½ inches apart—she weighed 1344 lbs. in February last, when she was merely in good milking condition—price $100.

CHERRY, the heifer described above, price $120.

TOM JONES, a singularly fine Bull Calf, of 8 months, with extraordinary points, from Cherry, by George—price $120.

BARON, a very large Bull Calf of 10 months, from the Queen, by George—he weighed when seven months and seven days old, 700 lbs., price $100.

BILLY AUSTIN, a large Bull Calf of seven months, from Prize, by the noted imported Bull Denton. Prize was by Denton, out of Bughorn, (a fine Cow of tried milking stock:)—she took the Prize at the Worcester Cattle Show, in October, 1819—in October, 1822, she took a silver plate at the exhibition of the same place—price $150.

ROB ROY, a three year's old Bull, with very great points, fine head, horns, chaps, and great length of carcase, by Denton, from Brindle, remarkable as a milker—price $250.

NONSUCH, a large and well formed Bull Calf, nearly 12 months old, by Denton, from the Marlborough Cow—price $150.

STEAM BOAT, an uncommonly large Cow of five years, showing much Tees-Water blood, her pins are 27 inches apart—in February last she weighed 1736 lbs.—price $150.

The QUEEN, the remarkable Cow of five years, which took a silver cup at the Maryland Exhibition in June last—price $150.

BESS, a large Heifer of three years, of the Holstein and Alderney blood—price $75.

Mr. William's Bull Denton, was bred by Mr. John Wetherell, of Kirkly, Leicestershire. He has been invariably considered perfect in form, by all who have seen him in this country.

Denton was by old Denton, dam by Baronet, grandam by Cripple, great grandam by Irishman—Old Denton was by Comet, grandam by St. John, great grandam by Sir Old Danby.

Persons *desirous of purchasing* will please apply to the Editor of the American Farmer.—To those taking more than one some abatement may be made.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, at the North West corner of Market and Belvidere-streets, Baltimore, *where every description of Book and Job printing is executed with neatness and despatch*—Orders from a distance for Binding, with proper directions, promptly attended to.

AGRICULTURE.

MR. GARNETT'S ADDRESS.

[CONCLUDED.]

With respect to wheat, there are many methods not generally practised, by which a considerable saving of time and expense might be effected. And first, as it regards seeding. We simple, three-shift farmers, consider it a very important saving to sow our wheat in corn land; the previous culture of which last crop, effects such a complete preparation of the soil, that a single ploughing with small ploughs, and one harrowing, if the corn is all cut off, accomplishes the whole seeding process, without a hand-hoe, except among stumps, and in very grassy spots. I am aware that I am now treading on very debateable and debated grounds; and I am not without apprehensions, that a whole host of fallowists, and your 5, 6, 7 and 8-shift farmers may assail the above opinion, which is totally deficient in complication to recommend it. But be it known to all whom it may concern, that I speak only of our Rappahannock country on tide-water, where naked summer fallows have been found not to compensate the farmer for the additional labor of preparation; and indeed it is a doubt with many, whether wheat sowed in corn land with us, does not make full as much per acre, as it will from a naked fallow. In defence of our 3 shift method, I will state the following facts, both general and particular, from my own experience: The first is, that my fields, cultivated in 3 shifts, but grazed only by sheep, have obviously improved considerably in a few years, both in my own opinion, and in that of all who have noticed them. The second is, that an acre of corn, (the best in my field) which I have just measured, produced sixty bushels. The same acre, three years ago, produced only ten barrels and one bushel. All that has been done to this acre for improvement, was to roll in plaster the wheat which was last season sown upon it, and last spring to sow one bushel of plaster on it, as it was ploughed up for corn. The seasons were nearly alike. In both, we suffered much from drought—not less, I think, during the present summer, than when this acre made ten barrels and one bushel, and the culture in both cases was as nearly alike as practicable; and the distance 5½ feet by 18 inches, single stalk.

Another great saving in the seeding process is, to select the best and purest seed, and not to be too sparing of it; for it is obvious, that unless you give as much seed as your ground will bear, you must loose infinitely more in your crop, than you possibly could have saved by sowing thin. Most of us, I believe, have heretofore erred in this particular; for experience has proved, that our lands in general, wherein we have formerly sown from three pecks to one bushel, will produce much better when the quantity of seed has been increased from one bushel to one and an half per acre. Thick wheat is also much safer from rust, than thin. Another important advantage in seeding may be gained, by levelling the ground, either by chopping with the hand-hoe, or harrowing, and rolling much more than is common. Although there is some little additional labour at first, this is amply compensated by the more equal distribution of the seed; by preparing the surface better for grass seed, where you wish to sow them on your wheat; and by greatly facilitating the clean collection of the wheat itself when cut—either by the hand, or horse-rake, which last is a labour-saving implement, said to be of great value, by all who have ever tried it. The present mode of collecting this crop by hand-rakes of the worst possible construction, and drawing it together in ox carts and horse-wagons, is to the last degree wasteful, tedious, and expensive. Half the usual team with low slides, drawn either by single horses, mules, or oxen, which slides can take their loads without requiring (as in the cart and wagon fashion) one hand to stand on the top of the grain, and another on the wheel, in order to take it from a third, who has his station on the ground, will draw the whole crop together in nearly half the time consumed by the usual mode. These slides are nothing more than two long poles, connected by a platform of boards of thin plank, in front of which are two uprights fixed in an auger-hole, or mortice, at the two upper corners, to the other end of which uprights a small rope is attached. This rope, after the slide receives its load, placed crosswise with the heads in the centre, is passed over it, and hooked in two notches made in the other uprights, which are loosely fixed at the two lower corners, that they may be taken out, as soon as the load arrives at the destined spot, when the whole slips out without tangling. The lower uprights are then again placed in their holes or mortices, and the slides return to the field. The front end of the poles are long enough for a horse or mule to be geared before the platform, and the other ends extend about the same distance behind. Any common crop-hand, with three grains of common sense, can make them; and the only cost, except the labour, is a few nails. Lastly, the common method of separating the grain from the straw, by treading it out, has no one circumstance to recommend it, but is in all respects the most wasteful, slovenly, and expensive that could be devised. To use machines, which are now so improved as to cost very little, saves all the time and labour of stacking; the grain requires but one fanning, which may be executed by the same horse-power that works the machine; whereas trodden wheat always needs two fannings, and sometimes three, all performed by hand. Machined wheat commands a better price at market, will make better flour, and the offal is incomparably more valuable. Yet such is the inveteracy of habit—the more inveterate always, when we are conscious of its being wrong, that treading with horses or mules and sometimes even oxen, is still the prevailing method.

Whilst we are on the subject of economizing, I will take this occasion to suggest, that a very general saving might be made in selecting the best implements of every kind—for the best are always the cheapest in the end; instead of the scandalous, make-shift tools, which are found on far too many of our farms; some of them, indeed, so little resembling the things for which they are intended, that a stranger, accustomed to good agricultural implements, would be puzzled to guess what they were. There cannot be a greater mistake in economy than this make shift plan, which is as irrational, as it is common. For even admitting that a half-tool will do half-work, there is an irretrievable loss of time. But the fact is, that it is a physical impossibility, for even half-work to be executed in the same time, if at all, with an implement half worn out, or so illy made, as scarcely to answer half the purpose of a good one. Yet there are thousands, into whose heads you can never beat it, that economy means any thing but the immediate, direct saving of money. To tell them that the best mode often of economizing, is *to lay out money*, provided it be done judiciously, would be to subject yourself with them, to a strong suspicion of lunacy. Such men never can be made to believe that they get their "money's worth" in any thing that they purchase; and if they can only contrive, no matter at what expense of time and labour, to cobble up (" within themselves," as they call it) some awkward imitation of what they want, they chuckle and exult in their own fancied ingenuity and thrift, and conceit themselves in the high road to agricultural wealth and distinction. Not that I would by any means check the wish to make what we want, instead of purchasing, if the saving is *real*, not *merely apparent*. But whenever this self supplying fancy seizes us, we should take care never to forget, that the cost of the self-instructing scheme, in regard to the making of agricultural implements, is precisely the difference between the work of cobblers, and that of master-workmen—added to the time lost both in making and using tools of inferior quality. It would be well also to remember, that unless we buy of others such articles as *they make*, and *we want*, *they* cannot purchase of us such things as *we make*, and *they want*. "To live and let live," is a maxim of universal application; and if properly introduced into practice, forms one of the surest and strongest ligaments of society. Without this, indeed, the division of labor, which is one of the greatest advantages of the social state, would prove a curse instead of a blessing. This maxim in fact, contains within itself the essence of universal justice. Once establish it, as the rule of conduct for nations, as well as individuals, and not only would contention, slander, cheating, extortion, and theft, cease in private life, but war itself, that dreadful scourge, and greatest disgrace of human nature, would forever disappear from the fair face of creation.

I will conclude these observations, relative to the saving of time and expense, in the foregoing particulars, with a few remarks on economizing in the operations of fencing and ditching. In all open, level land, the latter process should be executed principally with the plough; the throwing out the dirt, and trimming the sides, being the only operations which require other tools.—These last should be spades and ditching shovels, instead of hand hoes, which are most commonly used, and frequently so worn out, as not to hold more than a handful of dirt each. As to fencing, it seems to be a prevalent opinion, that live fences should be preferred on every account to dead ones. This opinion, however, I think we derive from too close an imitation of the English system of husbandry; which, but a little reflection will satisfy us, is not in all respects adapted to our country. In regard to live hedges, for example, I think it in my power to prove, not only that they are not the best and cheapest inclosures for general purposes with us, but in fact, the dearest and worst, except in a few particular situations; and even then, that they are not entitled to so great a preference, as has generally been conceded to them. I can affirm, from my own experience, that a cedar post-and-rail fence, without any ditch, the materials for which, grow spontaneously over a large portion of our state, and will grow by planting, almost every where in our country, will last, without the slightest repair of any kind, for thirteen or fourteen years; and may be made to last 6 or 8 years longer, by a few occasional supplies of rails and posts. But this last fact need not be taken into the calculation, by those who think it too vague as to the quantum of repairs. I also know, from my own experience, that either cedar, chesnut, or locust —(the last of which is still more durable than either) will, in 14 years, grow sufficiently large, to make the fence anew, if planted by the side of it—one or two to each pannel. A few words now, as to the cost. Throughout a large portion of our state, wood for fencing will not sell at all; and where there is any market for it, the price is so low, as to render the cutting of it for sale, but a poor business. In the first of these cases, then, which are much the most numerous, no expense should be calculated, but the cutting, preparing, and putting up the materials. The posts of my fence were not even hewed—the only labour bestowed on them being the cutting off at each end, and boring with a two inch auger, six holes to each post. The rails were made simply by cutting the poles of a proper length, trimming the bodies, and fitting each end into the auger holes. This was the whole cost for 14 years; but the fence would have been equally permanent, if put up (as I have since tried) like a common worm-fence, and secured at each lock by two large stakes or split posts, fastened together by a large wooden pin, which mode would occupy not more than one fourth part of the time spent in making the post-and-rail fence. Let us now endeavour to ascertain the time and cost of making a live-hedge. The shortest time, that I have ever heard assigned for the maturity of one, has been 8 years, and the longest 14;—the last of which, from my own observation, I believe to be much nearer the truth. But we will assume a middle period, and say, that 11 years are necessary to complete a live-hidge. To say nothing of preparing the ground and planting—the hedge, during the whole period of its growth, will require land, either originally good, or made so by manure. It will require also, at least two annual cultivations with the plough or hand-hoe, and one annual pruning—the last of which operations, not only becomes more and more laborious every year, but must be forever repeated at stated intervals, or the hedge will attain such a growth, as to shade and impoverish a considerable portion of your land. The greater part of 11 years too, the field which this hedge is designed to inclose, will require, for its protection, either a very deep ditch, or as good a dead fence, as would be necessary if no hedge was there; and after all, not one hedge in twenty will be so carefully reared, as to exclude all kinds of stock equally as well as a good fence. But last of all, our law of descents, which is still farther sanctioned by a public feeling daily increasing in its favor, opposes an insurmountable objection to the adoption of live hedges, as a general system of inclosure. This law, co-operating with public sentiment, is perpetually changing both directly and indirectly, the sizes and shapes of our farms. Divisions and subdivisions are continually making; and these again are removed, and many small farms so united, as again to form large ones. Unless, then, it can be benificial generally to the cause of our agriculture, for our planters and farmers to *do*, what they may know beforehand, that others must necessarily *undo*, or lose by the neglect, it seems perfectly obvious, that no kind of fences will suit *our* state of society, but such as are soon and easily made; and speedily removed to other situations, when found to be in the way, in their original positions.—In England, the dimensions and forms of *their* farms are secured in most cases for many generations, by their law of primogeniture, and by their clerical and noble orders. With us, the natural love of change, which prompts each succeeding generation to alter what their fathers have done, added to that necessity for alteration, which results from the nature of our institutions, renders it altogether impossible for either the shape or size of *our* farms long to continue the same. If, therefore, there are any situations in our country, where live-fences are preferable to dead ones, it must be only around yards, gardens, orchards, and along permanently fixed public roads. But even then, I have strong doubts, provided we consult economy alone, whether fences, such as I have described, of locust, cedar, or chesnut, either combined, or each wood by itself, would not be found to be far preferable. At all events, before we go any farther in efforts to rear live hedges, which we know that our children, or some other persons must necessarily cut down, let us make better calculations, than we heretofore have done, in regard to the policy of adopting them, either as a general, or partial system of inclosure. I have said nothing of stone-fences, because the materials are not generally found in sufficient quantities; but these fences are manifestly the best of all, when they can be made without the labour of distant transportation.

I will no longer trespass on your time, gentlemen, but conclude with expressing my anxious wish that the approaching Congress may relieve our suspense and solicitude by a complete revision of our present tariff; and by the adoption of such a moderate and permanent system of duties, as may secure an adequate revenue for all legitimate purposes, without materially affecting consumption, or injuriously checking the industry and enterprise of either of the three great classes of society. To attempt the regulation of their private concerns by extending towards them what is called "Government protection and encouragement," nearly resembles in folly, and far surpasses in mischief, the conceit of the philosopher in Rasselas, who imagined that he had the power to regulate the seasons. As the Deity alone can wisely manage the last, so the animating and all controling principle which *HE* has implanted in each individual bosom to seek its own happiness, is, in general, the only safe guide for the management of the first. This is a matter which our political principles have fixed as far beyond the power, as the God of nature has placed it beyond the ken of our government. Let agriculture, commerce and manufactures stand as they ought to do—on their own footing; neither looking up to government, and praying for partial, unconstitutional interferences in their own favour—but each laboring in their respective vocations to manage their own private affairs in their own way; and they will then show themselves for what they naturally are,—good friends, mutually dependent on each other for necessaries and comforts;—not ever restless and quarrelsome rivals for government patronage.

MASSACHUSETTS AGRICULTURAL SOCIETY.

The following papers are now published for preservation and reference. They may in most particulars serve as models for other societies, less experienced than the ancient and respectable society of Massachusetts—we should always be glad to get useful hints from any quarter, much more from one so eminently worthy of respectful consideration.—*Edit. Am. Far.*

RULES AND REGULATIONS,

To be observed at the CATTLE SHOW, EXHIBITION OF MANUFACTURES, PLOUGHING MATCH. and public sale of ANIMALS AND MANUFACTURES, at Brighton, on Wednesday, the 10th, and Thursday, the 11th of October, 1821.

I.

Business will commence on each day, at 9 A. M. On the first day, the Trustees and Members of the Massachusetts Society for Promoting Agriculture, will move in procession from the *Agricultural Hall*, to the Meeting House, where prayers will be offered, and an Essay on an Agricultural subject will be delivered; and the names of Gentlemen composing the several Committees, and other necessary arrangements, will be announced.

II.

All Stock, entered for Premium, must be put in the Pens before 9, A. M. according to the numbers on their Tickets, as furnished by the Clerk, and under the direction of the Marshals.

III.

Gentlemen who have *Fine Animals*, not intended to be offered for Premiums, will gratify the Society by exhibiting them in their Field, where Pens will be allotted to them, subject to the same rules with those who contend for Premiums.

IV.

No Animal can be removed from the Pens, but by permission of a Marshal or Trustee.

V.

The avenue between the ranges of Pens, is intended exclusively for the *Trustees*, *Committees*, *Members of the Society*, and invited persons; it is therefore requested and expected, that no other person enter the same, but at the invitation of one of the Trustees; but the *Field* will be free to all.

VI.

All Articles, under the head of "*Domestic Manufacture*," it must be carefully noticed, are to be deposited in the Society's Rooms, on Monday the 8th, to be examined by the Committee, on the 9th, *being the day before the Cattle Show.* Persons offering them will hand to the Secretary, the necessary Certificates of the growth of the Wool and Flax, and of the Manufacture, being within the State of Massachusetts, as they are not permitted themselves to be present at the examination by the Committee; but they are expected afterwards to see to their own goods, which are not allowed to be removed from the Hall, until after the public sale on the 11th.

VII.

All persons offering Articles under the head of "*Inventions*," will place them in the Lower Hall as directed by the person who will be there to receive them, *on Monday the 8th, and on the 9th*, they will attend the Committee, furnished with evidence of their usefulness, &c. agreeably to the premium list.

VIII.

Those persons offering *Working Oxen*, (having regularly entered them,) will arrange them in the Society's Field, under the direction of a Marshal, and must thereafter be under the direction of the Committee for that purpose.

IX.

Those persons who have entered *Ploughs for the Match*, will have them in the field designated for that purpose, and be ready to start at 9, A. M. of the 11th.

X.

The following Gentlemen being appointed Marshals, Col. D. S. Greenough, Col. Lusher Gay, W. Tileston, and G. W. Beale, Esq'rs. it is expected that every person having business at the *Show*, will follow their directions, as also those of the Trustees of the Society, so that proper order and regularity may be supported.

XI.

As the Chairman of each Committee will prepare Rules and Regulations, it is expected and required, that all persons having business with either Committee, will govern themselves accordingly.

XII.

The Premiums will be awarded on the 11th at 4, P. M. in the Meeting House; and the Treasurer will immediately after, in the Society's Hall pay all premiums awarded to persons living more than 10 miles from Boston; and all others are requested to call on him within ten days.

XIII.

The examination of *Animals*, will be on the 10th, and the trial of Working Oxen, and the

Ploughing Match, and the sale of Animals and Manufactures, will be on the 11th of October.

XIV.

All Fat Animals must be weighed before entering the Pens, at the expense of their owners.

XV.

Animals to be sold at Public Auction on the 2d day, (agreeably to notice in the Hand Bill for Premiums,) must be entered, and a description of the same given the Secretary on the 10th, to enable them to enter the proper Pens, on the morning of the 11th; the sale whereof, will commence in regular order, at 11 o'clock, precisely. An Auctioneer will attend to the sale, free of charge to the owners, who must be responsible for the delivery of their own Animals, in conformity to the conditions of the sale. The sale of Manufactures will commence in the Hall, at twelve o'clock. Proprieters of Goods will have a list prepared to hand to the Auctioneer; they are also expected to collect their own monies; it being fully understood, that the Auctioneer is only to *bid off* the same, free of any expense; and the sale will commence with the first entry, and proceed on regularly.

XVI.

Any Members of the Society who have not received their Certificates, will find a person attending for that purpose, at their Office in the Agricultural Hall, who will deliver them, on payment of Five Dollars, the sum agreed upon instead of all annual assessments. The same person will also, on application in season, furnish Tickets for their Dinner, at Dudley's Tavern.

XVII.

The Hall will be opened between the hours of half past 2 and half past 4 o'clock, on the 10th, *exclusively* for the Ladies and those Gentlemen who accompany them, for the purpose of seeing the Manufactured Articles. A person will be appointed to wait upon the Ladies through the rooms, during the hours prescribed.

GORHAM PARSONS,
JOHN PRINCE, *Committee of*
P. C. BROOKS, *Arrangements.*
S. G. PERKINS,

AN ACT

In addition to an act for the encouragement of AGRICULTURE *and* MANUFACTURES.

Sec. 1. *Be it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same,* That the several Agricultural Societies incorporated, and which hereafter may be incorporated within this Commonwealth, shall be, and hereby are authorised and empowered by their Trustees, or other officers, by them designated for the purpose, to define and fix bounds and limits of sufficient extent for the erection of their cattle pens and yards, and for convenient passage ways to and about the same, on the days of their annual cattle shows and exhibitions; and also for their ploughing matches, and trials of working oxen; within which bounds and limits, no persons shall be permitted to enter or pass, unless in conformity with the rules and regulations of the Trustees or other officers of said societies respectively. And if any person shall enter or pass within the bounds and limits thus fixed and defined as aforesaid, contrary to the rules and regulations of the Trustees or other officers of said societies, as aforesaid, after he shall have been notified thereof, he shall forfeit and pay a sum, not less than one dollar nor more than five dollars, to be recovered before any Justice of the Peace of the same county, in an action of the case, at the suit of the Treasurer of said society, to the use of the society aforesaid: *Provided, however,* that nothing herein contained shall be construed to authorise such societies to occupy or include within their limits as aforesaid, the estate of any person or persons, without the consent of the owners thereof, or to occupy any public highway in such manner as to obstruct the public travel therein.

Sec. 2. *Be it further enacted,* That for the purpose of enabling the societies aforesaid, to give greater efficiency to the rules and regulations of their respective officers for the preservation of good order, on the particular occasions of their public cattle shows and exhibitions, the Trustees of the said societies respectively, shall be, and hereby are authorised to nominate and appoint a sufficient number of suitable persons, who shall be inhabitants of the county, to act as marshals, who shall be sworn to the faithful and impartial discharge of their duty, and shall have the same authority in relation to the preservation of the public peace, and to the service and execution of criminal process, and which may be directed to them accordingly, within the towns respectively, in which such shows and exhibitions may be held, as Constables by law now have; and they shall exercise their said office from twelve o'clock at noon of the day preceding the day of the commencement of such shows and exhibitions, until twelve o'clock at noon, of the day succeeding the termination thereof, and no longer.

[*Approved by the Governor, February 9th,* 1821.]

From the Aurora.

CANALS.

The attention, directed to canal navigation, in various parts of the United States, at the present moment, is highly honorable, and promises great advantages, to the country at large. The glory, which is merited, by setting the great example, in this particular, belongs to the state of New York; it is true that Pennsylvania was the first to make an attempt, and that Massachusetts was the first to complete, an artificial water communication; but New York has a just claim to renown, as the successful accomplisher of a work, which, in boldness of design and rapidity of execution would do honor to the most enlightened and powerful nation. It is asserted in the New Hampshire Gazette, that no less than five new canals are now in contemplation in the New England states; and if our eastern neighbors direct their energies to such works, as zealously as they have devoted them to manufactures, there can be no doubt but similar success will be their reward.

The state of Ohio has engaged Mr. James Geddes, one of the most skilful engineers of New York, to make the requisite surveys and estimates for the Ohio canal—a work which would connect the Ohio with the lakes: Mr. Geddes is to receive a salary of $1500 a year, and his expenses are besides to be defrayed. When we consider that so stupendous a work is contemplated by so young a state as Ohio, we blush at the tardiness of Pennsylvania, and are disgusted at the efforts of those, who for factious purposes, still grumble at the efforts that are now making to retrieve the character of the state.

The people of Baltimore appear to be sensible of the vast importance of the trade of the Susquehanna, and accordingly propose to make a canal sixty miles in length, in order to overcome the obstacles which the falls in that river oppose to a free navigation. Far from desiring to damp their ardor by depreciating the importance of the Susquehanna, we do not hesitate to say, that highly as they estimate the trade of that river, it is still more valuable than they suppose. As to the consideration, that the completion of the proposed canal may benefit Baltimore to the disadvantage of Philadelphia, it is too grovelling to be seriously entertained: whatever is for the advantage of Pennsylvania, must be beneficial to Philadelphia; and as a multiplicity of markets must be of importance to the state, it will be the fault of Philadelphia, if it shall not derive a fair proportion of advantage and honour from every improvement on the borders of the state. In making the great canal, the enlightened statesmen of New York did not pause, because a large portion of the western trade would be likely to pass from the canal down the Susquehanna; they had the prosperity of the whole state in view, as well as the welfare of their great maritime port, but they did not check the one with the fallacious expectation of serving the other; any such policy is as contemptible as it is false.

With respect to canal navigation in our own state, as much is doing as is perhaps practicable in the outset. All that is said in Maryland about the vast consequence of the Susquehanna, is so much urged in favor of exertion in Pennsylvania; the increase of population and improvement in the interior of the state, is far greater than is supposed even by well-informed persons: the mere fact that we are in earnest attending to the union canal, has given a spirit to enterprise, and attracted population to vacant lands. It is in the natural course of things, that settlers from the east and north should come into Pennsylvania: the migration of such persons to New York, has greatly contributed to its prosperity, and a similar result must follow in this state. It is absurd, therefore, to imagine, that, any improvements made by Baltimore can seriously affect Philadelphia—the resources of Pennsylvania are equal to the supply of both ports, if each will be content without a monopoly.

But above all, the formation of canals will have so great an influence upon the minds, manners and affections of *Americans*, by as it were concentrating them or attracting them to each other, that he must be a sorry politician indeed, who can descend to a calculation about local pecuniary advantages or losses. Our territory is extensive even to unwieldiness—its extent is unfriendly to a similarity of principles and habits; so that he who gives the smallest aid to strengthen, by approximation the ties of political and social affinity, will contribute to the happiness and duration of the republic.

FROM THE NEW HAMPSHIRE PATRIOT.

Turnips may be raised with advantage: they afford not only sauce for the family, but much food for cattle and sheep. The garden will yield a supply for early sauce, and new land the best for the table in winter. But it is principally for the purpose of providing sustenance for cattle and for sheep that their cultivation is recommended.

Of this vegetable there are various kinds, but the Swedish turnip (Ruta Baga) is preferable. It is most productive, most nutricious and easiest to be preserved for the future use of cattle.

They will grow in almost any soil when well prepared; but in a light soil, consisting of sand and loom, they may be raised in the greatest perfection. They will flourish in a rich heavy soil, and the crop will be abundant, but too rank to be sweet.

In the preparation of the ground, manure, sowing and culture, and the harvesting and preservation of turnips, a method should be observed nearly similar to that of raising carrots.

As the stems and leaves of turnips are much larger than those of carrots, the rows should be more distant—at least three feet apart, and the plants in the rows twelve or fourteen inches from each other. This distance is necessary for their growth and to admit the horse plough without injuring the plants. Half a pound of seed is sufficient to sow an acre. Before the seed is sown, it is adviseable to put it into a vessel with water and skim off the light defective seeds which rise on the surface. The residue may then be rolled in lime or plaster and then sowed. The best time for sowing seed is from the tenth to the thirteenth of June.

More than eight hundred bushels of turnips have been raised to the acre ; but four or five hundred may be considered as an average crop on good land well cultivated. The produce of such an acre will afford much food for cattle and sheep—it will be more than the hay which several acres afford. The leaves and stems of the Swedish turnip on one acre will be equal to a ton of hay ; but as these cannot be preserved long in a sound state, they should be given to the cattle when green—in that state they will eat them greedily. The turnips should be given to the cattle and sheep the last of winter and during the spring before the grass grows in the pasture ; at that season cattle not only need succulent food, but the turnips are then in their best state : for Cobbett observes these turnips are not fully ripe and fit for use till February.

The cultivation of turnips not only yields a profit to the farmer, but they meliorate the soil on which they grow by the swelling of their roots, and prepare it for succeeding crops. " No person" says the Encyclopedia, " ever deserved better of a country, than he who first cultivated turnips in the field. No plant is better fitted for the climate of Britain, no plant prospers better in the coldest part of it, and no plant contributes more to fertility. In a word, there has not for two centuries been introduced into Britain, a more valuable improvement."

As contributing to the supply of food for cattle, cabbage is an article that may be profitably raised in the field. By setting the plants three feet distant from each other on a line in rows running each way, so much of the labour may be done with a horse plough, so as to leave but little for the hoe. The quantity of food, that can be raised on an acre thus cultivated is very great, and will afford much nourishment to cattle in autumn and early in winter, when grass fails and they require support from the barn. Nor is the labour great that is necessary for the culture of this vegetable ; but to obtain a good crop, the ground should be previously ploughed several times and well manured. Farmers, if they would make the experiment, would find this method of procuring subsistence for their stock less expensive and more profitable, than that of *purchasing more land* for pasturing and mowing. The extending the limits of our farms, and the neglecting the cultivation of what we possess, is an error that cannot too often be reproved. This error has been so long cherished, that it has acquired the force of *habit*. And every successful method of raising more food from less land has a tendency to correct the evil, and render the farmer more content with his farm.

The cultivation of the pumpkin is an object worthy the attention of every provident husbandman. It not only furnishes means for increasing the variety of dishes for our annual festivals and other days, but contributes to the support of our cattle and swine. In autumn and the early part of winter they afford good food for swine, particularly so, when boiled, mashed and mixed with a small portion of Indian meal. And there are few things, of which cattle in general, are fonder, and on which they thrive better. For those that are fatting, and for milch cows, they are excellent—they give a fine colour and pleasant flavour to the milk. There are but few articles which I raise on the farm with so little labour that afford so much profit. I plant them every year with my Indian corn, and the same labour that raises the corn, cultivates the pumpkins ; and I obtain from five or ten cart-loads from the acre. They will grow on any land that is capable of yielding corn. " Pumpkins," says Mr. Rose, " are usually raised by our farmers among their corn : but, although useful that way, I am persuaded that there are but few crops that will better pay the farmer's care, than pumpkins raised by themselves. And it is useful for a farmer to have as great a variety of forage and provender as he conveniently can. Without pumpkins and abundant root crops, he will feed his cattle to great disadvantage."

Beans are a vegetable that every farmer should raise. They will grow well in a deep moist soil, and flourish on clay ground. I have found no difficulty in raising them on land that was unfavourable to the growth of corn. But if the land is very richly manured, they often run too much to vines to yield a large crop Of this fact I am convinced by repeated experiments made in different years on varions kinds of soil. I caused several hills in a row to be supplied with as much manure as what I put on Indian corn, the vines in those hills were three times as large as in the adjoining ones, but the quantity of beans they yielded was not half so large as from the same number of hills which had only half that quantity of manure. Where a crop of beans is raised they communicate a blackness to the soil resembling vegetable mould or loamy soil. The fact is they receive much nourishment from the surrounding atmosphere, and appear to impart a portion of it to the land. Their roots strike deep into the earth and meliorate and prepare the ground on which they grow for succeeding crops.

They should be planted about the same time as Indian corn ; and in hills from two and a half to three feet apart. They should be hoed twice, and that when they are dry. Hoeing them when they are wet either with dew or rain as injurious, and usually produces a rust fatal to the crop, If after the second hoeing, weeds should come up, it will be necessary to remove them, or they will materially injure the beans.

As an article for culinary purposes they are valuable, not only when green, but after they are ripe ; the white bean, when properly dried is a good and wholesome sauce at all seasons of the year. The demand for them is considerable, and they command a fair price in the market. From long experience I have found them useful as food for sheep late in winter and early in spring.—CINCINNATUS.

From the Massachusetts Agricultural Journal, Vol. 4, No. 2.

WET UNPRODUCTIVE MEADOW RECLAIMED.

By S. W. Pomeroy, Esq. Vice President of the Massachusetts Agricultural Society.

In compliance with the request of the Board of Trustees I will endeavour to detail the management, in reclaiming a tract of 20 acres of Woodcock-meadow, or swail, upon my farm ;—the contrast between its present and former appearance having attracted some attention. The soil is a light, black, vegetable mould, mixed with fine white sand, upon thin, alternate strata of blue, yellow-veined clay, and the same kind of fine sand. This sub-soil retained all the surface water, and so level and wet was the whole tract, that the hay seldom paid the labour of harvesting ; and except in dry summers its value for pasture was trifling—besides, one quarter was occupied by flag ponds and mounds, that produced nothing. No part except four acres of the upper end had been subdued, in any other way, than by cutting the bushes and floating ; the vestiges of a dam for that purpose now remain—a ditch through the centre five feet wide, carried off, slowly, the water from the spring and winter floods of the neighbouring high-grounds. I began at first, with ten acres, and the next year the whole was under the plough—it was struck out into lands of from one to two rods wide, as was found convenient, on account of roots, mounds, &c. and in a direction to the ditch ; the lands were back-furrowed, as it is called, and the water furrows were cleared out by one or two extra bouts—as the tract was narrow, the ditch being incumbered with roots, and its sides unequal, it was found necessary to plough directly across, by which it was nearly filled up. The first heavy rain its contents were of the consistence of mortar, and a stop was put to all operations. To have cleared it out with shovels would have been a heavy and expensive job ; a plough was tried with very little advantage. A maple sapling, that had been taken up with all its close and horizontal roots, extending four feet, was cut 6 feet long, hitched to a strong team, and with a man mounted on it, was drawn several times through the middle of the ditch, completely scooping out a passage for the water, throwing the mud on each side, and filling up the inequalities ; the only manual labour necessary, was to clear out the mouths of the water-furrows with a shovel, which was soon performed—in the subsequent operations, the maple was frequently resorted to, with similar success. When sufficiently dry the lands were harrowed, in the same direction they were ploughed, and then ridged with a large Dutch plough and two yoke of oxen, these ridges were made by turning one furrow nearly upon another, the space being perhaps ten inches, into which the manure was put, and were about five feet apart. In the centre of the ridges potatoes were planted in hills, from three to four feet apart—in cultivating, they were ploughed between the ridges *only*, with a yoke of oxen, or two mules *tandem*, and the earth to form the hills, taken out of the furrows, so that the ridges remained entire, and the crop secure from too much wet, which otherwise would have destroyed it. As it is not the intention of this communication to state the particulars of this crop, I shall only observe, that it was an average one, with the uplands in the neighbourhood—had the manure been more suitable for potatoes it probably would have exceeded ; but in applying the manure, which was a compost of bones and hoofs from the soap and glue boilers, fermented with leeched ashes and sandy loam. I was governed partly by necessity, and having in view, the preparation of the two first substances for the permanent crop of grass that was to follow, they being of too fiery a nature to be laid down *fresh* with grass-seeds. The next season, the lands as first laid out, were again back-furrowed, ridged, and the same process pursued as before, with less labour, the same kind of manure, and the crop rather better ; and as soon as it was off, the lands were ploughed in the same manner as before, for the purpose of laying it down ; but they were not sufficiently convex to take off the water entirely, and very unequal. Repeated ploughing and harrowing might have produced the desired effect, but time would have been wasting, and it became necessary to try the operation called turnpiking. A scraper, made of thin pine plank four feet long and two feet wide, shod with iron, with a couple of old plough handles fixed by staples conveniently for a man to hold, and small chains connected with them from the centre, to which the chain from a yoke of oxen were hitched. The scraper was then placed in the water furrow of the first land in such a position as would take up as much earth as the oxen could draw and walk briskly. When he came to the centre of the land, which may now be called a *broad ridge*, the man raised the scraper and followed on to the next, treating each ridge in the same manner till he had gone over fifteen or twenty, he then came about and returned by the side of his former track, till he had performed the same operation over the whole—in some parts a second scraping was necessary.—As the scraper was light the man held it up till he came to the water-furrows, or such places as he wanted to take the earth from, and the work was not harder than to hold a plough in new rough ground. As there is no stopping, the oxen may perform as much in a day as they can harrow with a harrow of the same width of the scraper. After the ridges had been harrowed level, and the water-furrows cleared out, the whole resembled a field of turnpike roads. To each acre were spread 200 bushels of dry leeched ashes, and 3 pecks of timothy seed, sown, harrowed, and rolled—the sowing was from the 20th September to the 1st November, and on most parts the seed vegetated before winter. It was my intention to have kept a particular account of this enterprize, but the work, owing to wet weather, and other causes, became so blended with other operations of the farm, that it was found impracticable. I believe, however, that the potato crops nearly paid the expense, the two first years; and I am convinced that the whole expense besides the value of the crops, including the extra expense, compared with laying down common upland, did not exceed ten dollars per acre. The crop of grass the following season owing to the plants being so very young, was light—heads were formed but no seed produced. The hay resembled rowen, and was of more value than any crop the land would have borne had it been sown with the grass seed in the spring, as is usual. The land for four successive years since, without a dressing of any manure has averaged two tons per acre—not estimated tons, as taken out of the field, but weighed out in the winter and spring in the Boston market, being put in a barn by itself, and an exact account kept of the sales. The last season the crop was lighter, but no water remaining even in the water-furrows, it has become a fine perennial meadow, and with slight top dressing once in two or three years will forever be productive of the sweetest herbage. The value of the land in the estimation of many, who were acquainted with its former state, is thought to be more than quadruple.

It may be proper to state, that I have not suffered the land to be fed with any kind of stock, but have some seasons taken a second crop.

Brighton, 25th April, 1816.

Extracts from the last file of the London Farmer's Journal, received at the office of the American Farmer.

STATEMENT OF THE EXPENSES OF FARMING.

Walton-upon-Thames, 12th Feb. 1822.

SIR,

Annexed to this is a statement founded upon my estimate of farming expenses, published in your Journal of the 2nd April, 1821, showing what per cent. the different charges are of the total expenditure. I also add a statement, showing what per cent. grain is below the importation prices. My object in giving these documents is to point out, that excepting an abatement of rents is obtained of nearly 93 per cent. it is impossible with the existing taxation for farming to be carried on to a profit with the present price of produce. Before proceeding farther it may be necessary to premise that the estimate referred to was given as a fair average of the expenses of farming in England, and was made upon a farm tithe-free, and wholly arable, seed and keep of horses having been reckoned at the importation prices, and labour at the rate of twelve shillings a week for a man. Further, that in the estimate of the produce that accompanied the above, the grain was charged at the importation prices, and a value put upon the green crops; that 5s. 4d. a stone for live stock was required to afford, and that with these prices there was only a trifling balance left after paying the expenses. First, I have to notice that from the annexed statement it appears that grain is at present 48 per cent. below the importation, or what has been proved to be the lowest remunerating prices. Taking 5s. 4d. a stone as the lowest remunerating price for live stock, and 3s. as the present value, gives a reduction of 43¾ per cent. on this article. Reckoning the former at two thirds, and the latter at one third of the produce of a farm, the above shews that it averages 46½ per cent. below what has been proved to be needful, with the scale of expenses of 1821, to indemnity the farmer. Provided these data are correct, it is clear that, to save from loss, the whole of the outgoings upon a farm must be reduced in the same proportion, that is, 46½ per cent. The important inquiry then is, if it is possible, under the existing taxation, to effect such a reduction. By referring to the annexed document it will be seen that seed, and keep of horses, amount to about 27 per cent. These being the only charges that farmers generally have received an abatement in, equal to the fall in the price of produce, there remains 73 per cent. to be brought to the reduction required. Of this, rent is 23 per cent.; and however hard it may be upon the landed interest (till the taxes that effect them are taken off,) it is certain, if the present state of things continue, this charge will soon sustain the above fall. This would bring one half of the expenses to the scale required, to admit of corn being grown at present prices, but the difficulty is in effecting the reduction in the other half. With the exception of poor rates, I admit that all the charges that compose it may be reduced, but that the reduction can be carried so far as 46½ per cent. I contend is impossible, without first reducing taxation to the scale of 1792. How much reduction, under the present taxation, can be effected I cannot undertake to say, but no one who has reflected on the operation of the taxes in increasing the expense of the farmer, labourer, and tradesman, will, I think, be sanguine enough to believe that more than 25 per cent. is practicable. If then the charges which constitute this half of the expenses cannot be reduced more than the above, there will be a loss of 21½ per cent. on it, or 10¾ on the total expenditure. To allow farming to be carried on, this loss must ultimately come off the landlord, and which will make a further reduction of his rent of 46½ per cent., and which, added to the 46½ already reckoned upon, make a total of 93 per cent., thereby leaving him only 7 per cent. I need hardly add, that this is a consideration that ought to excite the most earnest attention of every landed proprietor in the kingdom. The certain effect in my opinion of the present circulating medium (gold at the old standard of £3. 17s. 10½d. an ounce) is to establish a low scale of prices; and if under such a scale the taxes are not greatly reduced, they must operate in destroying not only the landed interest, but also the agricultural capital of the kingdom. In concluding, I cannot forbear noticing a letter on the subject of taxation, signed *A. B. C.*, and published in your Journal of the 4th inst. Although I do not feel myself competent to shew the full extent of the pressure of the taxes upon agriculture, yet I have no hesitation in saying, that the view that the above letter gives is extremely imperfect. For instance, in the article shoes, he has omitted the additional charge that both the tanner and shoe maker must make to enable them to pay the taxes on the various articles used by them, as well as the interest on the amount of duty advanced by them. The same observations apply to beer. The malster and brewer, besides requiring a larger profit to enable them to pay their taxes, must also charge interest on the duty advanced by them. This is the more needful, as their risk from bad debts is more than tripled in consequence of the taxes increasing the price of their article in that proportion. Surely the circumstance of all who have not the means of brewing their own beer, paying at this time 300 per cent. duty in that article, ought to convince *A. B. C.* that the taxes press much heavier than his calculations have shewn.

I am, Sir, your's respectfully,

ANDREW SCOTT.

FARMING EXPENSES.

Rent - - -	23,208	per cent. to total expen.
Poor and Church Rates - - -	4.641	per do. of do.
Assessed Taxes & Insurance - -	.771	per do. of do,
Tradesmen's Bills	4.362	per do. of do.
Keep of Horses	16.752	per do. of do.
Diminution in value of do. - -	.837	per do. of do.
Labour - -	21.400	per do. of do.
Seed - - -	10.091	per do. of do.
Manure, &c. -	3.141	per do. of do.
Incidental Expenses - - - -	.837	per do. of do.
Keep of family, public expenecs, &c.	13.960	per do. of do.
	100,000	

Average prices of Corn for the week ended Jan. 26th, being the fourth of the six preceding Feb. 15th.

Wheat	£2	10	7	Import. price of do.	£4	0	0
Rye -	1	4	5	- do. of do. - -	2	13	0
Barley	1	0	2	- do. of do. - -	2	0	0
Oats -	0	16	9	- do. of do. - -	1	7	0
Beans -	1	2	5	- do. of do. - -	2	13	0
Peas -	1	4	8	- do. of do. - -	2	13	0
	£7	19	0	being 48 pr. ct. less.	£15	6	0

ON TARES.

Pump-court, Temple, November 21, 1821.

Sir,—The mention of tares made in your last paper, induces me to trouble you with a few observations on that highly valuable tribe of plants to which much less attention has been paid than their importance in agriculture justly demands: and inasmuch as every small stay which can retard the impoverishment of the farmer must be useful, I hope that I may be pardoned for intruding on the notice of your readers.

Of the *vicia*, properly so termed, there are many species, besides mere varieties: I am not acquainted with more than two species which are strictly perennial; these are the *vicia sepium*, or bush vetch, and *vicia cracca*, or tufted vetch. The first of these produces so very early an herbage, so rich, so bulky, and so many crops in the year, (for it may be cut three or four times in the year,) that it is very singular this plant should not have obtained a place in the cultivation of improving farmers: the obstacle, probably to its general introduction is, the circumstance, that its seed lies long in the ground, often till the following year before it comes up, but it appears to me amply to repay the delay.

The *vicia cracci*, or tufted vetch, does not spring early in the season, but it produces a profusion of rich fodder late in the summer. It is also prolific of seed, and it possesses the happy quality of not being stifled by grasses when it is intermixed in meadows. It thrives in the stiffest clays, even in those which are very poor, and in reducing such to permanent pasture, this plant, if the seed can be procured, should never be omitted. The seed of this also lies long in the ground, and the plant does not attain maturity till the third or fourth summer, but it seems of long duration afterwards. It therefore seems desirable to discover a fit course of crops with which this may be so combined that the ground may not be unproductive, while this plant is attaining its maturity: perhaps, if sown with wheat early in autumn, and if clover be sown in spring, it might succeed.

Of the annual tares, it may well be doubted whether any will ever be found much superior to the real winter tare, *(vicia sativa)* hardiness, nutritive quality, and bulk, being all considered. It is well known to be much superior, in the two first of these qualities, to the *vicia lathyroides*, or spring tare, although the latter surpasses it somewhat in bulk, and much in the rapidity of its growth. The Canadian lentile or white tare is probably more grateful to sheep, because the haulm is slenderer and finer than either of the two last preceding plants; this, if sown in autumn, comes into blossom a fortnight sooner than the winter tare but it suffers much more from a severe winter than does the common winter tare. If sown in spring at the same time with the spring tare, the Canadian lentile blossoms about a week before the latter, as I proved in the last summer. It is tolerably prolific of seed, which surpasses in brilliancy of colour the most delicate pea, but the plant is much smaller in bulk than is the spring tare.

Another annual tare, of which I have conceived the highest hope, is a newly discovered species, which Mr. Vilmorin, an eminent botanist at Paris, has named *vicia pseudocracca*, from its resemblance to the *vicia cracca:* this sown in September, had a decided advantage over the winter tare in the month of April, in the luxuriance of its growth; and it kept the superiority both in height, and probably in weight also, during the whole summer. It flowered most profusely, but it had been sown too thick for its habits of exuberant growth; and the seed pods rotted under the bulk on the ground. It promises a great abundance of early food for ewes and lambs, and probably would bear a second growth after once feeding, sufficiently ample for the purposes of hay or a seed crop.

Vicia Monantha is too tender to bear severe winter, if sown in autumn, in wet land; in a rich warm sand, and after a moderate winter, like the last, it is excessively productive of a large matted seed, and its herbage is very considerable. The narrowness of its leaf renders it (unless thickly sown) less capable of smothering weeds than the broad-leaved winter tare.

Vicia Lutea, or yellow-blossomed tare, also is very productive of seed, and if sown in September, well endures a moderate winter; but this like the last preceding species, is of much less bulk than the winter tare.

The *vicia biennis* and *vicia sylvatica* (after several small experiments,) appear to me little worthy of cultivation, at least in a calcareous loam; they have yielded me so little produce, that the extension of their vegetation to a second year does not appear to compensate for their deficiency of bulk and difficulty of growth.

I have several other species of tare, of which at present I know so little, that it does not become me to offer an opinion on their value: after another year I shall be better acquainted with their worth.

Should these lines be deemed worthy of insertion, I shall, at a future time, state my remarks on a few species which I have in growth, of the *genera, lathyrus, ervan*, and *lens*.

I am, Sir, your obedient servant, W. P, T.

STATE OF THE BRITISH REVENUE.

Abstract of the Net Produce of the Revenue of Great Britain (exclusive of the Arrears of War Duty on Malt and Property), in the Years and Quarters ended 5th Jan. 1821, *and 5th Jan.* 1822, *shewing the Increase or Decrease on each head thereof.*

	Quarters ended 5th. Jan.		Inc.	Dec.
	1821.	1822.		
Customs. - -	2,117,659	2,486,896	369,237	
Excise. - - -	6,315,737	6,390,939	75,052	
Stamps. - - -	1,535,474	1,497,128		38,346
Post Office. -	321,000	308,000		12,000
Ass'd Taxes.	2,333,674	2,292,788		40,966
Land Taxes.	427,582	473,000	45,418	
Miscellane's.	114,187	119,696	5,509	
	13,165,313	13,568,217	495,216	92,312
	Deduct decrease		92,312	
	Inc. on the Quarter		402,904	

	Years ended 5th Jan.		Inc.	Dec.
	1821.	1822.		
Customs. - -	8,631,891	9,135,102	503,211	
Excise. - -	26,364,702	26,546,415	181,713	
Stamps. - -	6,151,347	6,108,640		42,707
Post Office.	1,389,000	1,318,000		71,000
Ass'd. Tax.	6,311,346	6,256,811		54,535
Land Tax.	1,192,257	1,263,274	71,017	
Miscellan's.	293,938	303,463	9,525	
	50,334,481	50,931,705	765,466	168,242
	Deduct Decrease.		168,242	
	Inc. on the Year.		597,224	

The revenue of the year ending the 5th Jan. 1822, therefore, is about £51,000,000, and exceeds that of last year by nearly £600,000. On reference to Mr. Vansittart's budget of June last, it will be seen that he stated the total charge for the year to be £52,000,000. The income to meet this charge is as follows:

Total revenue for England -	£51,000.000
Supposed revenue for Ireland -	3,500,000
	£54,500,000

The surplus, therefore, of £2,500,000 may be called the Sinking Fund, available on the 5th of January, 1822, for the redemption of so much of the debt of £800,000,000 as £2,500,000 will purchase.

In those articles which are considered luxuries, there has been a very considerable decrease. The duty on wine is £8,620 less this year than in the preceding; and the demand for foreign spirits has decreased so much, as to make a difference of £102,306 between the duties of two years: tobacco and snuff, no slight sources of enjoyment to a large class of people, have been used with such comparative temperance as to produce a diminution of £128,251 in the profits of the excise from that source. As a set-off to these reductions, it appears that the tea-drinkers have contributed an addition of no less than £158,722 to the revenue of the preceding year, while the drinkers of beer have supplied a quota of £76,750. The comparative cheapness of British spirits has also created a demand for that beverage to the amount (in duty) of £42,364 above the former year. It is somewhat curious, that the increase on these two articles of beer and British spirits is very nearly equal to the decrease in wine and foreign spirits. So that, perhaps, the balance in comfort, as well as in revenue, is pretty nearly equal. As for those who have sacrificed their taste for tobacco and snuff, we suppose they have sought consolation in tea, for here again the increase and decrease are nearly equal.

ON FEEDING SHEEP WITH MANGEL WURTZEL.

Herefordshire, Jan. 25th 1822.

Sir—It is rather unusual for a man to write on a subject, which he professes to be totally ignorant of; and in addition to this, your correspondent Mr. Thorpe, in his letter of January 3rd, seems disposed to doubt the veracity of one who has planted and used mangel wurtzel for several years past: however it is done openly, and in an inoffensive manner; therefore I freely forgive him.

I have neither leisure nor inclination to enter into a controversy with Mr. T.; but I deem it necessary to answer his letter of the 3rd inst. and to repeat, for his satisfaction, if he pleases, that "I weighed five wether sheep and put them into a barn, as stated in my letter of the 12th ult. and in that situation they were regularly supplied with 25lbs. of mangel wurtzel *(less than three roots)* and 5lbs. of good hay during every 24 hours, for each sheep, and this continued for five successive weeks, at the expiration of which time they were weighed out, and had gained upon an average 8lbs. per quarter." It seems to strike Mr T. with wonder, that animals should gain so much more than he states they would gain, when at grass in the month of May and the following months; but when it is considered, that the sheep were penned up in a warm barn, and without the possibility of exercise, they were much on a footing with pigs in a stye, fed on barley meal and pease, or like unto turkeys, if crammed with the best Carolina rice. It is not at all extraordinary for animals having an aptitude to fatten, to make still greater progress, when fed on such a sweet succulent root as mangel wurtzel, corrected with a little good hay. Mr. T. pleads his being a novice in the cultivation and general knowledge of the root; therefore, under such circumstances, it may be difficult for any one to convince him of its extraordinary properties: it is possessed of greater specific gravity than that valuable root, the Swede turnip. Perhaps Mr. T. is unacquainted with the fact, that during the reign of that enterprizing man, Buonaparte, he passed a law, that all farmers in Flanders should set apart a portion of their farms for the cultivation of this root, for the purpose of making sugar, and which experiment more than equalled his most sanguine expectations; good sugar was produced at one shilling per pound, when at the same time West India sugar was selling in France at five shillings per pound:* this circumstance will give Mr. T. some idea of the nutritious quality of mangel wurtzel. With regard to the manner of cultivation, I must leave that to the able hand of your correspondent Mr Addams, who has, I think, promised to give it to us in detail; but as the method I pursued last season may be additional information, I will briefly state it. The land (a sandy soil) was prepared as for Swede turnips, good rotten dung placed in drills, at 18 inches distance in the rows, and my plants were full 12 inches apart: the seeds were planted the last week in April, not exceeding two inches under the surface, with a small planting stick, taking care not to put more than one pod (*which contains more than one seed*) in each hole; the plants make their appearance in about 21 days; and when about the size of cabbage plants, care was taken that only one plant remained in a hole; they were kept clean by a single horse hoe in the rows, and hand weeding between the plants: after having had immense quantities of the large leaves taken from them during the last four months they were in the ground, they were pulled up about the end of November (but this greatly depends on the season,) and placed in heaps in the open ground, and covered with straw and earth similar to potatoes; some I placed in an out-house, but I think it matters not which. What remained in the month of April following, were as fresh as when taken up; but what adds greatly to the value of this root is, that it is taken up in time to put in wheat, and the land is in very high tilth to receive it. It gives me pleasure, Mr. Editor, to be the means of drawing forth observations on the cultivation and use of a root that promises to be of incalculable value to the United Kingdom, provided we have equal protection with the trading and commercial interests.

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* *See that entertaining work Radcliffe's Agriculture of Flanders.*

I remain your well wisher.

PEDIGREE OF HUBBACK.

Elemore Hall, *Nov*. 19, 1821.

Sir,—Attempts having been made, through the channel of your paper, by hearsay evidence and otherwise, to question the blood of Hubback, I send you his pedigree. I have the authority of Mr. Charles Colling to say, he always considered him a thorough-bred Short-horned Bull. Mr. John Hunter, of Hurworth, who sold his dam, with Hubback at her foot, to Mr. Bassnet, of Darlington, says his father bought her of Mr. Stephenson of Ketton, and that she was a pure-bred Short horn. Mr. Alexander Hall, of Sherraton Hill Top, who lived in that neighbourhood, and remembers her and the calf perfectly well, says she was a beautiful colour and handler, and when she got on to good land near Darlington, she got so fat she would not breed again. Hubback, he says, was got by Mr. Snowden's bull, a son of Mr. Robson's bull of Dinsdale, who was bred by old Mr. Waistell of Burdon, a very noted breeder, and got by Mr. James Masterman's bull, of Coatham, near Darlington, and was a true-bred Short-horn.—The above Gentlemen will attest the same if necessary.

I consider the name of Improved Short-horn to come from the breed of Hubback, and Mr. Maynard's cows, which, from time and judicious crossing, have brought them to their superior excellence. No cow or bull can ever be called a Short-horn with a cross of Scotch blood; for I would just as soon put the Duke of Grafton's Penelope to a Scotch pony, to breed a racer, as a cow to the grandson of Bolingbroke, out of a Galloway cow, to breed a Short-horn.

Your obedient servant,
GEO. BAKER.

To cleanse the teeth, and improve the breath.

To four ounces of fresh prepared lime water, add one drachm of Peruvian bark, and wash the teeth with the water in the morning before breakfast, and after supper. It will effectually destroy the tartar on the teeth, and remove the offensive smell arising from those decayed.

TO THE EDITOR OF THE AMERICAN FARMER.

Sir,

As a novice in Agriculture, I am anxious to know with what breed of cattle, you would *now* stock a farm. I have read in new books, and have seen in the Farmer, so many accounts in no wise agreeing, that I am led to enquire the result of experience, rather than rely upon the opinions of theorists, before I discard, for the favorites of the day, the stock of my grand-father's farm.—At one time, Alderney's were in fashion; fitted for every purpose; suited to every soil; peculiarly adapted to our climate; to all but our purses Next came North Devons in turn; their beauty, agility, vigour, and shape, had attracted the eye of the "rich Mr. Coke," and had been honored by mingling in "Holkham Park" with his Deer. As milkers, we are told they were unrivalled in Norfolk; in America, of course they could not be surpassed. Next came Tees-Water in vogue; and Lawrence, and Culley, and Curwen, and Bergami were brought to uphold the renown, of great Colling's name—hand bills, sale bills, and prize caps were shown to prove, that we Yankees could boast of distinction as great, as the famed Breeders of Bulls, on the rich banks of the Tees—that "*long horns, middle horns, and no horns*," must yield to "*short horns*" in fame. Great Bergami was sought by the rich and the knowing—his movements were traced upon both shores of our state; his favors, and labors were valued so highly, that nothing but congressmen's wages could tempt him to move. Importations were made—new orders were given in support of Tees-water renown. The animals were brought—the exhibition was made—scales, milk pails and statesmen decided the question, which no longer depended upon Bingley, or Bloomfield, but happily rested, with gentlemen farmers at C*ld Sp***g and B*******d W**d.

Now again Devons are puffed—perhaps we shall hear—but to bring some new champion forth, to oppose their extravagant praise—As I am not learned, and your are so skilled, with the aid of a sapient throng, do, Mr. Editor, confide to me privately, if you will not do it publickly, whether it is, Short Horns, or Devons I should buy.

Your humble servant,
TIMOTHY CLODHOPPER.

Baltimore County, 23*d* April, 1822.

Would the writer have us destroy the interest of these discussions by a flat palpable demonstration—*if we could?* Oh no! It is *our* opinion that as "much may be said on both sides," as upon the North West Coast dispute between the Yankees and the great Czar; let the controversy go on; only have recourse sometimes to *facts*.—We hope the contest will not be decided until all the best breeds have been introduced—one of which may be most advantageous for one part of the country and another for another part.

Editor American Farmer.

ON THE VARIOUS WAYS OF PREPARING AND EMPLOYING INDIAN CORN.

TO THE EDITOR OF THE AMERICAN FARMER.

There are many things the rich have no need to think of, which would be of infinite advantage to the *poor*; if they had the knowledge necessary to turn that product of their labour they have most in their power, to their own comfort—you may perhaps smile when you perceive this preamble is to usher into notice the virtues of *Indian corn*. I will allow you to do so, if you can find in my enumeration one use to which I put that valuable grain, worthy of being more generally known. In order to swell the list I mention some of the purposes for which it is used, that *are known* to every one; before I enter into the detail of preparing a dish, which I consider the best, healthiest, and most palatable food we have, I will begin with it before the seed is perfectly formed; it can then be made if properly done, a *fine pickle*. We all know how delicious *roastin ers* are; when fit for this use it will make a superior *starch*; if scalded and dried you may have *roasting ears* in the middle of winter. When the grain is hardened, you have for all the domestic animals in the shocks, tops, &c. &c. The leaves of the shock or husk, by slitting them finely, make excellent *matrasses* or under beds. The flour or meal of the grain is the most wholesome we use; I need only mention a few of the ways in which it is managed in this state, for I should never have done were I only to give you the receipts for making the various kinds of corn bread common in this part of the country. A favorite way of making corn bread with us, is to make a batter with meal, milk, eggs, and a little shortning,* about the consistence of that for pound cake, which it resembles in appearance when baked in tins commonly used for that purpose. In making light bread by mixing the wheat flour and yeast with mush, we consider it adds much to the sweetness and wholesomeness of the bread; we likewise in all griddle cakes, mix meal with wheat flour as tending to make them lighter, with fewer eggs than they would take with wheat flour alone—in short, we use corn meal on all occasions either with or without wheat flour—not because we have not flour sufficient, but because we prefer meal. I can assure my fair countrywomen, they need not apply to quacks or perfumers, or (I forget what they call them) I mean those foreigners who vend poisons, under the pretence of rendering those that use them more beautiful; and recommend them, because a few wornout old women have made out, by attending to nothing else but the application of various arts to hide their deformity for a short time, who having no beauty to endanger, cannot fear the consequences. I say those who do believe in the virtues of cosmeticks will find my favorite corn meal superior to all the washes, de Maintenon, &c. &c. it will render the skin smooth, transparent and white—and withal it is perfectly safe; only let them try it instead of going to one of those venders aforesaid, and spending two or three dollars for a nostrum, which at best will only be of transitory benefit, leaving a lasting ill effect; let them put over the fire a pint of water, when it boils stir in as much fine corn meal as will make it the consistence of paste—when cooling they may add a spoonfull of honey and a little rose water, though the latter articles are not necessary—let them use this *paste*, or as I vulgarly call it, *mush*, instead of soap every time they perform their morning and evening ablutions, or, in other words, wash themselves. I venture to affirm their complexions will derive more advantage from the application of this paste, than any of those washes which they pay so high for.

I come now to the preparation of the grain, which I believe is not as generally known as it ought to be, considering its excellence. It is what we call lyed hommony; we likewise have the best hommony and small-hommony, both of which are common, are fine dishes and superior to rice when properly managed; but the lyed hommony is preferred by every one who is accustomed to it as being more wholesome and more palatable. It is prepared by boiling the white field corn in ashes and water, until the husk or skin of the grain is loosened, which will be the case in a few minutes, and it is necessary to pay attention that it does not remain too long in the ashes, as it will by that means taste of the lye—so soon as the husk is loosened, it must be washed and rubbed through the hands in cold water until the grain is cleansed from the ashes and skin, it may then be dried to make use of at any time, or boiled immediately if wanted. When ready to be cooked for the table, it must be scalded and put over to boil in plenty of water, observing always to keep sufficient hot water ready to add to it as the first boils away. The grain bursts open into a white ball and becomes soft when sufficiently done. This is the manner we boil it to eat with milk or cream, either warm or cold. It is also used in this country by the Indians and Creole boatmen, who prefer it to any thing else in a soup, by putting the corn over with a piece of beef or pork, leaving the water in it which makes the soup—in the other case the grain is taken out of the water. A yankee acquaintance of mine who knew nothing of hommony, has become so fond of this dish as to declare lyed hommony and milk to be preferable to the best sweet meats and cream that can be had, and I doubt not some there are who would think the same, were they equally to make the trial. I have been induced to write the preceding.

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* *A word in Domestic Cookery which implies that butter, lard, or oil, may be used.*

A Missouri Farmer's Wife.

Editor's Correspondence

Elkridge, *May 5th*, 1822.

TOBACCO BEDS.

If my ground had been ready I could yesterday have transplanted two acres from rough hot-beds, which I made on the 5th of March. I shall transplant from them this week, however, without waiting for *seasons.* The plants which I might have set out yesterday have leaves each as large as a dollar, and with their stem and root measure four inches long. The field beds made at the same time will not give me plants fit to be removed under six weeks at the soonest, which brings me to the middle of June, when the sun has great influence, and planting seasons are precarious. Last year, depending chiefly on field beds, I pitched a large part of my crop in the first week of July, and was pressed closely by frost when housing this in October; but this year, relying principally on rough hot beds, I shall plant my whole crop from these, and before the close of May; whereas if I had relied upon field beds this year, I could not, owing to some peculiarity of the spring, plant any part of my crop until late in June.

I send to you herewith, some plants from my hot-beds, and others from my field beds; from these you may form an idea of their relative condition, for the plants are selected from qualities of the best to be found in either kind of my beds. My corn planting will now be finished in three days, so that nothing can interfere with tobacco planting, until the time for hay making comes, and long before then my tobacco crop will be established. Is it not important to planters, to be thus certainly assured, as they are by the *hot bed system*, the day on which they may begin and complete their planting and housing?

What would not most of them give to have their crops pitched, and off hand before hay-making, and *corn-tending* comes on? What, to have their tobacco ripe in August, ready to be housed *half cured*, by the drought and heat of that month; uninjured, because unseen, by the latter glut of worms; and completely out of the way, when we should be saving corn-fodder, fall grain, and seeding.

Much as planters would gladly give to be assured of these facilities, of this certainty of order, and regular succession of their labours, is it not wonderful, nay almost incredible, that they should neglect the easy, cheap, and obvious means of accomplishing objects, so desirable and so important.

These beds are made on the surface; probably they would have done better, if sunk a foot at bottom, below it. During frost they were covered with straw mats made about 3 inches thick and 5 or 6 feet square—the warp of white-oak slips, straw for the filling, and this bound to the warp strips, by passing a smaller slip band around the straw and warp. The mats were supported above the plants on a ridge full 12 inches high, and laid on from each side, forming a comb at *top as roofs do.* My rough hot-beds are long narrow pens of logs: they are about 2 feet high, or two logs; 4 feet wide, and the length of each of them about eighty feet, or 3 long logs; they are near water, have a south exposure, at the base of a forest hill; had long stable manure pressed down in them until one foot deep, and six inches of virgin soil on the top of this: once made, they are easily renewed; for one bed of this year, will top dress two the next; the logs are for years in place when once fixed.

THE FARMER.

BALTIMORE, FRIDAY, MAY 10, 1822.

☞ THE NEXT MARYLAND CATTLE SHOW.

There is every probability of having at our next Cattle Show, a large concourse of distinguished farmers, from this and other states; but we fear that the number of animals exhibited, will not equal publick expectation. It is to be apprehended that many who have *fine* animals, will not send them from the fear, either of the trouble or of their being excelled. If all were actuated by this sort of indolence or pride, we should have nothing for exhibition; it is well known that many of the animals which took premiums at the last show, might have been beaten by hundreds of the same species, if it had been anticipated that such would be brought. The society have at considerable expense, erected a number of additional pens, and made such accommodations as ought to induce all true friends of these *rational and useful exhibitions*, to bring out whatever their farms can produce, in any degree excellent or worthy of notice; such as are not offered for premiums may be exhibited and offered for sale under the regulations of the Society, without expense to the owner. Be it remembered, that the Exhibition takes place on the last two days of this month, that pieces of silver plate valued at $500 are to be appropriated. That notice of animals intended to be offered for premiums must be given three days prior to the show, to J. S. Skinner, Post Master of Baltimore: that they must be in the pens assigned them on the ground at the Maryland Tavern, on the Frederick road, before 9 o'clock on the first day of the Show. The limits and rules of the Maryland Agricultural Society embrace, and apply to the District of Columbia, as well as to the state of Maryland; but one fifth of the premiums are discretionary and not subject to any local restrictions.

All Editors of papers friendly to the objects of this society, are requested to insert the above occasionally until the day of exhibition.

* * *

☞ SEED RECEIVED AT THE OFFICE OF THE AMERICAN FARMER SINCE LAST NOTICE.

Guinea Grass Seed—from James Troup, Esq. Darien, Georgia.

Remarks.—"I received your kind favour of the 5th inst. covering some Ruta Baga seed, for which I thank you; in return I enclose you some fresh Guinea Grass seed, the product of the last season. It is a grass much sought after and promises to be very generally cultivated in this part of our country."

Potatoes—Irish Potatoes from the Hon. S. L. Southard, U. S. Senator from New Jersey.

These Potatoes were brought by a Mr. Gage of New Jersey. from the neighbourhood of Manchester in England, and are called the Foxite Potato—all who have eaten of them agree that they very much excel any other for mealiness and fine flavour.

* * *

PRICE CURRENT—corrected weekly.

Flour from the wagons, superfine $6 75—Wharf do. $6 50 cash, $6 62½, 90 days—Susquehanna, do, $6 12½, cash—$6 25, 60 days—Wheat white, $1 41 to 1 45—Red, do. $1 38 to 1 140—White Corn, 78 to 80 cts.—Yellow, do. 71 to 75—Rye, 76 to 78—Oats, 35 to 40—Barley, out of season—Shad No. 1. trimmed, $7—Do. do. No. 2, $6—No. 1, untrimmed, $5 75 to 6—No. 2, do. do. $5—Herrings, No. 1, $2 25 p. bbl.—No. 2, do. $2—Whiskey, 33—Rice, $3 25 to 3 50—Apple Brandy, 36 cts.—Peach, do. none—Tar, N. Carolina, $2 25—Rosin, $2 25—White pine boards, per M $10 to 30—Pitch pine boards, $10 to 30—Bees-wax, 37½ to 40 cts.—Beef, Baltimore mess, No 1, $8 to 8 50—No. 2 do. $6 to 6 50—Pork, mess do. $13 to 13 50—prime do, $11 to 11 50—Bacon, hams, 10 to 12½ cts.—Middlings, 7 to 8 cts.—Lard, 8 to 9 cts.—Candles, New England, 16 to 19 cts.—Salt, Liverpool coarse, 50 to 55 cents—Turks Island 65 to 70—St. Ubes, 53 to 55—Sugar, Havana, brown $9 to 9 50—White do. $13 to 13 50—Coffee, (W. I.) green, $28 50—St. Domingo, $26—Molasses, (W. I.) 30 to 32 cts.—Soal Leather 28 to 32 cts.—Rough, $4 50 to 5 per side—Butter 25 to 37½—Eggs, 10 to 12½ cts—Live Cattle, $5 to 6—beef, prime pieces, 8 to 10 cts,

TOBACCO, MARYLAND, sales of the present week, of an excellent quality, are, one parcel from Anne Arundle county, raised by Mr. Edward Warfield, $24—do. from Gen. Wm. H. Marriot, Mr. Thomas Anderson, Manager, $20—do. from Mr. Edward Shipley, raised from old ground, of a darker colour than the above, $18—Common Tobacco, same as last report, and very dull.

For Sale—Don Carlos,

A fine young *Jack*, bred on the Island of Majorca, and imported last summer in the U. S. ship of the line, the Columbus. He was selected about 18 months ago, by a good judge, after long examination, as the best to be found on that Island, famous for the production of animals of this race.

He is five years old; upwards of thirteen hands high, and very stout—remarkably gentle and good natured—colour brown. It is probable that he will be at the cattle show, near Baltimore, on the last two days of this month—for terms apply to the Editor.

May 1st, 1822.

FOR SALE

A Full Blooded Bull Calf,

OF THE DEVON BREED.

Apply at the Office of the American Farmer.

Printed every Friday at $4 per annum, for John S. Skinner, Editor, by Joseph Robinson, at the North West corner of Market and Belvidere-streets, Baltimore, *where every description of Book and Job printing is executed with neatness and despatch*—Orders from a distance for Binding, with proper directions, promptly attended to.

AGRICULTURE.

FROM THE NATIONAL GAZETTE.

Extracts from the History of Cultivated Vegetables; comprising their Botanical, Medicinal, Edible and Chemical qualities; Natural History; and relation to Arts, Science, and Commerce. By Henry Phillips, *author of the History of Fruits known in Great Britain.—London*, 1822.

MINT

Should be cut for drying, just when it is in flower, and on a fine day; for if cut in damp weather, the leaves will turn black. It should be tied in small bunches, and dried in a shady place out of the wind; but to retain its natural virtues more effectually, it has been found better to place the mint in a screen, and to dry it quickly before a fire, so that it may be powdered, and immediately put into glass bottles and kept well stopped. Parsley, thyme, sage, and other herbs retain their full fragance when thus prepared, and are by this mode secured from dust, and always ready to the hand of the cook.

A conserve made of mint is grateful, and the distilled waters, both simple and spirituous are much esteemed. The juice of spear mint drunk in vinegar, often stops the hiccup. Lewis observes, what has before been noticed by Pliny, that mint prevents the coagulation of milk, and hence is recommended in milk diets. When dry, and digested in rectified spirits of wine, it gives out a tincture which appears by day-light of a fine dark green, but by candle light of a bright red colour; a small quantity is green by day light or candle light, a large quantity seems impervious to any light, but when held between the eye and the candle, or between the eye and the sun, it appears red. If put into a flat bottle, it appears green sideways; but when viewed edgeways, red.

MUSHROOMS.

So much are mushrooms now in request, that we cannot content ourselves with mushroom beds only, but we have mushroom houses also. The author, on referring to his diary of November the fourteenth, finds a memorandum that would have puzzled our forefathers.

"While gathering a mushroom, the ladder slipped and I was precipitated to the ground, without injury."

The mushrooms in the house alluded to were growing on beds supported one over the other, by broad shelves of elm planks, with a deep ledge to keep up the earth; but from the necessary fermentation of the manure, the planks are liable to rot, therefore, where durability is required, large flag stones should be substituted, and supported by iron props or brackets. Should stone be found too cold for the spawn, any slight boards that are not painted, may be laid on it.—As light is not necessary for the growth of this high flavoured vegetable, almost every country seat may furnish an out house for the purpose of obtaining mushrooms at all seasons, and of a safe quality.

The author has observed that the upper shelves in his Majesty's mushroom house at Kensington, were equally or more productive than those below: thus by good arrangement a small shed, or even a closet, may be made sufficient for the supply of a moderate family. As mice will destroy the spawn or young mushrooms, either traps must be set, or ingress allowed to their purring enemy.

In the neighbourhood of London, experienced mushroom men go about at the proper season, collecting vast quantities of spawn for the supply of seedsmen, who sell it by the bushel, the price varying according to the favourableness of the weather when it is collected. Since mushrooms have been so much grown on hot beds, and more minutely attended to, the plant has been found so perfect, that it can either be raised by seed, or propagated by roots, the several filaments at the root producing tubercles in the manner of potatoes, from each of which will arise new roots, and a new plant or flower.

The following simple and easy method is recommended for trying the quality of field-mushrooms, take an onion, and strip the outer skin, and boil it with them; if it remains white, they are good, but if it becomes blue or black, there are certainly dangerous ones among them.—Where the symptoms of poison have already taken place, the medical assistant recommends an emetic; drinking plentifully of warm water, and when the contents of the stomach are brought off, to have recourse to strong cordials, such as ginger-tea, and brandy, with laudanum, or cayenne pepper made into pills.

Barham describes the symptoms to be, that soon after they are eaten, a hiccup seizes the patient, then a cold or chilling all over the body, attended with tremblings, and at last convulsions and death.

The most venomous sort is one that rises out of the earth about six inches high, rounding and hollow like a bladder, red as scarlet, full of holes like fine wrought net work; which is most probably the *Clathrus cancellattus*. There is one kind of these mushrooms, that is said to kill the very flies that settle on them. According to Haller, says M. Valmount Bomare, the Russians eat even the mushrooms that the French consider the most dangerous, and which they use to kill flies; if this be possible, we conclude they have some method of extracting the venomous particles of the plant, unless like Mithridates of old, they have become so accustomed to poison, that it loses its effect on their constitution, as the Turks take opium with indifference.

We have not heard that the morel, a kind of mushroom, has yet been cultivated, although it is said to be good for creating an appetite, is accounted restorative, and is much used in sauces and ragouts. The following accounts of extraordinary mushrooms, which we meet with in the works of respectable authors, may perhaps subject them to the imputation of credulity.

Matthiolus mentious mushrooms which weighed thirty pounds each. Fer. Imperatus tells us, he saw some which weighed above one hundred pounds a piece. The Journal des Scavans furnishes us with an account of some growing on the frontiers of Hungary, which made a full cart load.

A mushroom of the very best quality was lately gathered in the neighbourhood of Brigg, in Lincolnshire, which measured three feet four inches in circumference; girth of the stalk, five inches and a half; it was two inches in thickness, and weighed twenty-nine ounces. Six others were gathered at the same time near the above, averaging about two feet in circumference.

Chambers relates, that some years ago, an extraordinary mushroom grew upon an old piece of timber in a blacksmith's cellar in the Haymarket, and attained the height of twelve inches or more, and when cut down, appeared again at the same time the next year, and so for several succeeding years. In the year 1692, M. Tournefort found such an one growing on an old beam in the abbey at St. Germain's: the smell was like that of others of the same kind. An infusion from part of it turned an infusion of turnsol to a bright red; so that it evidently abounded in acids. This seed must have been brought by some accident to these situations, unless the fungi originated in the decaying timber.

Lord Bacon says, "It is reported, that the bark of white or red poplar (which may be classed amongst the moistest trees) cut small and cast into furrows well dunged, will cause the ground to put forth mushrooms, at all seasons of the year, fit to be eaten; some add to the mixture leaven bread resolved in water. It is also reported, that if a hilly field, where the stubble is standing, be set on fire, in the showery season it will put forth great store of mushrooms."

The Laplanders have a way of using the common toadstools, as the Chinese do moxa to cure pains: they collect the large fungi which they find on the bark of beech and other large trees, and dry them for use. Whenever they have pains in their limbs, they bruise some of this dried matter, and pulling it to pieces, they lay a small heap near the part where the pain is situated, and set it on fire, in burning away it blisters up the part, and the water discharged by this means, generally carries off the pain. It is a rude practice, but said to be very effectual, where the patient takes it in time, and has resolution to stand the burning to a necessary degree.

PARSLEY.—The seed should be sown in the spring; it remains six weeks in the earth; it never appears in less than forty days, nor does it often exceed fifty: thus it takes longer to vegetate than any other known seed; but it is observed that old seed comes up earlier than new.

This herb is good for sheep that have eaten a kind of wild ranunculus, which causes a worm to destroy their liver. It is also said to be an excellent remedy to preserve sheep from the rot, provided they are fed twice a week, for two or three hours each time, with this herb. Parsley has been sometimes cultivated in fields for this purpose; but hares and rabbits are so fond of it, that they will come from a great distance to feed upon it, so that those who wish to draw hares on their estates have only to sow parsley in their parks or fields.

Parsley when rubbed against a glass goblet or tumbler, will break it: the cause of this phenomenon is not known.

To preserve parsley for the seasoning of meats, &c. let it be gathered on a dry day, and immediately put into a tinned roasting-screen, and placed close to a large fire; it will then soon become brittle, when it may be rubbed fine, and put into glass bottles for use.

PARSNIPS.—Contain a very considerable portion of sugar. In Thuringia, the country people evaporate the juices until it has the consistency of thick syrup, when they eat it on bread instead of honey, and use it in many cases as a substitute for sugar.

Marmalade made with parsnips, and a small quantity of sugar, is thought to excite appetite, and to be a very proper food for convalescence.

Wine made from those roots approaches nearer to the Malmsey of Madeira and the Canaries, than any other Wine; it is made with little expense or trouble, and only requires to be kept a few years to make it as agreeable to the palate as it is wholesome to the body; yet fashion induces us to give pounds for foreign wines, when we can obtain excellent wines of our own country, for as many shillings.

In the northern parts of Ireland the poor people obtain a sort of beer from parsnips, by mashing and boiling the roots with hops, and then fermenting the liquor

POTATO.—In 1807, Mrs. Morris of Union street, near the Middlesex Hospital, discovered that the liquor obtained in the process of making potato starch, would clean silk, woolen, or cotton goods, without damage to the texture or colour. It is also good for cleaning painted wainscots: and the white *fecula*, the substance of which potato-starch is made, she says, will answer the purpose of tapioca, and will make a useful nourishing food with soup or milk. It is known to make the best *souffles*, and has within these last few months been introduced at the foreign oil-shops as a new article, under the name of *Fecule de Pomme de Terre*, for which they modestly charge 4 shillings per pound.

Potatoes boiled down to a pulp, and passed through a sieve, form a strong nutritious gruel, that may be given to calves as well as pigs, with great advantage and saving of milk.

A size is made from potatoes, which has great advantages over the common size, for the purpose of white washing, as it does not smell, and it has also a more durable whiteness.

The most simple, and perhaps the most wholesome way of boiling potatoes, is in an untinned iron pot or sauce-pan; when boiled, pour off the water, and let them continue over a gentle fire; the heat of the iron will cause the moisture to evaporate, and dry the potato fit for the table.

ROSEMARY.—It is still the custom in some parts of this country, as well as in France, to put a branch of rosemary in the hands of the dead, when in the coffin; and we are told by Valmont Bomare, in his *Histoire Naturelle*, "that when the coffins have been opened after several years, the plant has been found to have vegetated so much that the leaves have covered the whole corpse." This account savours more of superstition than of the nature of the plant.

It is still the custom at the hospitals in France to burn rosemary with juniper berries, to correct impure air, and to prevent infection. The custom of using it at funerals may have had reference to this virtue in the plant.

Without entering into the extravagant opinions of the ancients respecting odours, we cannot avoid thinking that the effect which different smells and perfumes have on the mind, as well as the health, is not at present sufficiently attended to.

Most people acknowledge to have felt the refreshing odour of tea and coffee before tasting them; and in heated rooms the fragrance of a cut lemon, or a recently sliced cucumber, has been observed to give general refreshment.

The ancients held certain odours in the highest veneration. Among the Israelites, the principal perfume of the sanctuary was forbidden for all common uses. The smell of the incense and burnt offerings in their sacrifices was thought to dispose the mind to devotion; while others were used to excite love. "I have perfumed my bed with myrrh, aloes, and cinnamon." Some perfumes were prescribed to procure pleasant dreams; whereas others were deemed of a contray effect. It appears that they also employed odours as a nourishment when the frame exhausted; as it is related that Democritus, when on his death bed, hearing a woman in the house complain that she should be prevented from being at a solemn feast which she had a great desire to see because there would be a corpse in the house, ordered some loaves of new bread to be brought, and having opened them, poured wine into them, and so kept himself alive with the odour of them until the feast was past.

The sprigs of this plant were formerly stuck into beef whilst roasting, and they are said to have communicated to it an excellent relish. The leaves were also boiled in milk pottage, to give it an aromatic flavour; and before simples were so much out of use, the apothecaries made a distilled water, a conserve, and an electuary from this plant which also produces by distillation an essential oil, which was much esteemed for all affections of the brain.

Our next example shall be drawn from the more familiar *Faba* or bean.

The meal of beans is the heaviest made from pulse and was called in Latin *lomentum*. This was mingled with *frumentic* corn, whole, and so eaten by the ancients; but they sometimes, by way of having a dainty, bruised it first; it was considered a strong food, and was generally eaten with gruel or pottage. It was thought to dull the senses and understanding, and to cause troublesome dreams. Pythagoras expressly forbade beans to be eaten by his disciples, because he supposed them to have been produced from the same putrid matter from which, at the creation of the world, man was formed. The Romans at one time believed, that the souls of such as were departed, resided in beans; therefore they were eaten at funerals and obsequies of the dead.

Varro relates, that the great priests or sacrificers, called *Flamines*, abstained from beans on this account, as also from a supposition that certain letters or characters were to be seen in the flowers, that indicated heaviness and signs of death. Clemens Alexandrinus attributes the abstinence from beans to the opinion that they occasioned sterility; which is confirmed by Theophrastus, who extends the effects even to the plants. Cicero suggests another reason for this abstinence, viz. that beans are great enemies to tranquillity of mind; for which reason Amphiaraus is said to have abstained from them, even before Pythagoras, that he might enjoy a clearer divination by his dreams.

The Egyptian priests held it a crime to look at beans, judging the very sight unclean. The Flamen Dialis was not permitted even to mention the name. Lucian introduces a philosopher in hell, saying, that to eat beans, and to eat our father's head, were equal crimes.

Beans make one of the finest of all baits for fish, if prepared in the following manner: Steep them in warm water for about six hours; then boil them in river water in a new earthen pot, glazed in the inside; when about half boiled, to a quart of beans add two ounces of honey, and about a grain of musk; after which let them boil for a short time. Select a clear part of the water, and throw in a few of these beans early in the morning, and again at evening, for two or three days, which will draw the fish together, and they may be taken in a casting net in great numbers.

FOR THE AMERICAN FARMER.

February 15th, 1822.

Sir,

Your correspondent F., in your 44th No. Vol. 3. rails at what he thinks the growing fashion of saving a field of corn, by the speedy method of taking each hill off, stock, blade, ear, top and all, at a single stroke, if skilfully applied, with a sharp tool. That, which appears to be new in his neighbourhood, is certainly not new in districts as far south, as parts of Virginia. And if found a labour saving, and admirable method on the rich tract of the South Branch, even where wheat is not to follow, it must certainly be vastly more expedient where it is to follow the summer crop. I should hope that this "fashionable," yet nevertheless excellent method, will every where receive a fair trial; and if it does, it must prevail wherever wheat is to succeed corn.

Permit me to examine a little into F.'s statement. He found no good fodder after an examination of 20 fields, and if he had gone on to examine 20 more saved in the old way, he would still have been unsuccessful in finding good fodder; for it is within the recollection of most farmers in Virginia and Maryland, that a most uncommonly tremendous storm of wind and rain on the first Monday of September last, blew the fodder to ribbons; and should the method of saving be blamed for not making that good, which had been previously ruined? But this same storm completely prostrated and entangled the corn, and those, who did not cut their crop off, after all the previous trouble and time of catching at straws, in saving good for nothing fodder, had then, before they could seed wheat, either to set up, after a fashion, (and a very poor one,) every hill, or to turn two rows into one, and after ploughing the wheat into every other row, to turn the corn back into them, and plough the wheat into the alternate rows; or to scramble the wheat in after any fashion among the corn lying in every direction. The two first will take nearly as many hands, and as much time, as the whole process of cutting off and shocking the corn on the field; and the last would not only be very injurious to both crops; but disgraceful to the operator.

If you begin to cut off in time to have good fodder, you have "shrivelled corn;" and yet F. again says, "to the North where the grain is the chief object, they cut it off before the fodder is dry;" of course not to the injury or shrivelling of the grain, or they would not do it. Indeed we know the northern grain is generally very perfect and many pounds heavier to the bushel, than southern corn. And if F. is correct, that it can thus be taken off while the fodder is green, why cannot this fodder be cured in the nicest and sweetest order. Cut off and put immediately up into shocks containing 16 or 20 hills square, it cures very gradually, and with the least exposure to sun, rain, and dews. And if I am not egregiously mistaken, these are the desirable points to attain in curing hay, and all kinds of fodder. You must haul in your blades and top fodder; and if you will appropriate a turning row of 25 or at most 30 feet in width through the middle of your field, and rick your corn on this, of the size of one or two cart loads each, well put up, with a hole through the foundation lengthwise, made by placing the first buts a foot apart, and roofed off by putting on the last covering buts up, and well interlocked over the top or ridge, the haul will be shorter, than the haul of carrying your blades and tops at once to the barn and fodder house yard, and your corn will be every ear saved, and in nice order to go to husking out the moment you have finished seeding wheat. And I am clearly of opinion that the fodder, together with the stocks and corn of a field, can be cut off, shocked, cured, carted off, and ricked on this middle turning within the same space of time, that is usually occupied in pulling, curing, tying up, and carrying out the blades, and cutting and carrying out the tops, hauling in, stacking or stowing blades, and thatching the fodder house. In the first method the carting will require perhaps three times the number of loads; but the haul will not be half the distance of the latter.

"4th. You increase your labour by present handlings."

Compare the two methods closely. If you have difficult weather, the difference will be still greater in favour of cutting off the whole plant at once; but suppose every day to be favourable, you cut the tops and throw them down to cure, when cured you must again pick them up and carry them to the turning rows and place them in heaps for the carts. Here are at least two distinct operations and handlings, and twice walking over the field. You pull your blades (a tedious and piddling operation, and the dearest work that the farmer does in the whole circle of the year)—again you go over and collect them into bundles and tie up; again you go and collect into arms full, and carry out to the turning row, at least three distinct operations and three times travelling over the surface of your field; and if you set down the coming empty and going out loaded with each armfull of blades, and tops, you should fairly set down these carrying operations each at two travels over the field. Therefore by the time you have got your blades and tops deposited on the turning rows ready for your carts, your hands have actually handled the blades three times, and the tops twice; and have walked seven times over the surface of your field.

Now for the other method—at every blow of the cutter (and he will not make one more for the whole field, than did the top cutters,) the whole of the noble plant yields to his power, hill after hill falls into his arms, and if a right angle turn is made with every arm full, the cutters of each two eighth rows have only the width of seven rows to carry them out of the straight line of march.—The carriage of each of the other two corresponding rows to the shocks, is less and less out of the straight line, till you get to the two centre rows, which have no deviation. Thus by the time the field has been felled, level with the earth, and placed in shocks of 16 hills each, ready for the carts, you have performed but two operations; both done at one single handling, and the field has not been travelled over once and a half, taking into the calculation every inch of back and forth movement. Here is one handling and one and an half travels over your field to place the whole plant, fruit and all, ready for the cart, opposed to five handlings, and seven journeys over the field to cure and collect only the blades and tops, the corn, shuck, and stock are still untouched—and I am within the truth when I say, that the same hands will cut off the whole plant and shock up the produce of a field in half the time, that they can pull, cut, tie in bundles, and carry out the blades and tops of the same field. And of course by half the number of days that it will take to save your tops and blades, can the hauling in the new method begin earlier, than in the old—and with this advantage in the start, and the shorter haul; the operations of saving and clearing the field of the whole plant, and ricking up on the middle turning, can be effected and completed by the same day of September that you could finish your blades and tops, without injury to your teams and without a minute of night work. In the old way most of your blades must at least be tied up after night, if not carried out.

You are now ready by either mode to seed wheat; in the old, the corn is still in your way, even if it stands up straight, and three years out of four, it will be blown down, and your wheat will go in slovenly and unfarmerlike. In the new way you have a clear field before you, and if necessary can start harrows before your seed ploughs; an excellent method, by which the surface is levelled, the crust softened, and every grain lays where the seedsman threw it; if the field is grassy, this harrowing clears the way for the ploughs and accelerates the putting in. Your wheat goes in with ease and comfort, and equal to a nicely prepared naked fallow. In the old mode, at least two years out of four, your wheat has been put in with much trouble and botheration—as well as you could, to be sure—but not at all to your mind; and you have been in a constant scold, for the month of October; now with the setters up, then with the pickers up, now with the poor ploughman who is sweating and doing his best, for covering up the ears of corn, then for not lapping his first furrows, now for hauling it up in bunches, then, for his plough's jumping out and missing ever so much.

At the end of the job, the corn stocks lay across and athwart in every direction, much corn has been covered up, never to be recovered—at least 20 per cent. of the whole crop of ears are lying on, or partially in the ground, suffering from every vicissitude of weather, and if the field has been grassy, which is very apt to be the case, if the ground is in good heart, much of the work exhibits more the appearance of the rooting of hogs than of the operations of farming. This is no exaggerated picture, in a district of country that has been long under my eye.

The seeding over, how stands the comparison? In the new method your corn is now all ready to be husked, and carried to the corn house, the fodder to be ricked up on the same turning, enlarging their size by putting three of the corn ricks together, and making them safe for winter, from which they are taken to the feeding yard, a load or two each evening as wanted, after the work of the day is over. This fodder is not only excellent, but very rich and nutritious food—containing not only all the blades and the top; but the corn shuck and stock cured with their juices in them; and of three times the value of those saved in the old mode, which have remained out till both are weather beaten and dry. If you must have a fodder house thatched, this is easily done by making this disposition of as much of the fodder as is necessary, instead of ricking it all up where the corn is husked. This work is performed with husking, ricking, loading corn, and lofting—four operations.

What is left to do in the old mode? the field has been already by this mode travelled seven times over; go over it again, and gather the corn; again with the carts, and handle the corn again to throw into them; and let the hauling be what it may, wet or muck, go in the wheels and heavy oxen must, and trample and tear up your hopes of a wheat crop—after the corn has been got to the fodder house or husking yard, it is then to be husked, loaded into the carts, and lofted, and the husks or shucks put away. Two operations on the surface of the field, and four from the fodder house yard to the corn house, making six, and your corn stocks are still in the field. These according to F. are to be got in, though they are now dry and half their value is gone; again travel over the field to cut them down; again to pick them up and to collect into heaps; again the carts must go into, and over your promise of a wheat crop. Three operations to get the stocks off and in.

Now let us endeavour fairly to collect the account and strike the balance; seven journeys and five handlings after the blades and tops, to pull, cut, cure, bundle, and get them to the turning rows; then loading and hauling home, thatching fodder house and stowing blades, three more operations. Gathering corn, loading and carting home, husking, loading carts, lofting corn, and stowing away shucks; six more distinct operations, and two field journeys—cutting off stocks, picking up stocks, loading and hauling in stocks, three more field journeys and three operations—making twelve travels over the face of the whole field, and seventeen distinct operations and handlings.

In the new mode, cutting off and shocking up, loading and carting to middle turning, ricking, husking, ricking fodder after husking, loading carts with corn, and lofting; two and a half journeys over the field, and eight operations performed with seven handlings, for the cutting and shocking take but one handling. Here we have two and a half journeys and eight operations, opposed to twelve journeys and seventeen distinct operations. If I wanted to carry two bushels of ears of corn half a mile, and had one bushel in a bag, which I could sling on my shoulder, and make one turn with; and was obliged to make a separate journey of half a mile with every single ear of the other bushel, to get it to the same place; you might with almost as good a grace tell me that the transportation of the last bushel would not take me as many handlings, and as much pains, labour, and time, as the removal of the first bushel—as to tell me that the number of handlings of your crop in the new mode, bears any comparison to the multiplied handlings, and vexatious, catching straws operations of the old mode.

A man cannot husk quite as many barrels per day off the stock, as from an old fashioned corn heap; but after a little custom the difference is not as much as would be supposed; the gathering and hauling in will throw the old mode behind the new—and as to loss in husking, it bears no comparison to the loss in and on the ground, by knocking down and covering up, while ploughing in wheat. It would be great carelessness to leave corn unhusked, but if left, it is not lost, as the horses and cattle will get it. As to ploughing out the corn stumps, it must certainly be a very unnecessary and ill judged practice: why not plough your wheat in exactly the same beds, as you would, if the corn had not been taken off, and then the first two furrows are lapped up as well as you please, and the corn, roots and stumps more completely covered up, than they could possibly be in the old mode. The wide turning row will be good ground for a part of your flax crop.

In the new mode, Arthur Young's opinion, that corn was the most desirable fallow crop to precede wheat, becomes true; the crops are distinct and the operations are well separated, and effected in a farmerlike manner; both your provender ricks and manure heaps are handsomely increased, and your corn crop wound up in a shorter time. In the old mode the combination of the crops is injurious to both—much of the corn is covered up or left lying on the ground, and husks out with rotten and defective ends; the wheat crop is miserably put in, and often much injured by getting in the corn, and you are stock getting, or catching dry straws, all the best weather after Christmas, when you ought to be much more profitably employed. Do not condemn a fashion because it is new to you. I verily believe this method of saving a corn crop, a valuable improvement, and have therefore thought it worthy a detailed defence. By getting rid of a great number of petty and time consuming operations, it enables the farmer to condense into a month or 6 weeks the work, that is often scattered through the greater part of 5 or 6 months, viz. the blade and top saving of September, the corn setting up and picking up of October, the corn gathering and hauling in of November and December, and the stock getting of January and February.

I would wish to state the whole case fairly; I have myself but a single doubt with regard to the whole operation, viz. whether the ear will bear commencing the cutting off sufficiently early to take the fodder in its most valuable state. To aid in dispelling this doubt, F. himself seems indeed to bring testimony, by his relation of the northern practice. It may also be fairly brought into view, that if you commence fodder saving in the most careful manner in the old way, early enough to ensure getting all pulled and cut before the last saved suffers from drying, the ears will shrivel and shrink more or less on all the stocks first stripped. If Mr. Brush's statements are solid, with regard to the superior quality of the grain, harvested as soon as it is well out of the milk, (and I have no doubt of the fact as to wheat,) every thing desirable seems to concur in recommending the new method of saving and winding up a crop of Indian corn. When the blades and tops are in that stage, that the farmer calls ripe, the grain is known to be well out of the milk, and may then be cured in a high state of perfection unless it shall receive injury from the quantity of juice or sap, which still remains in the cob, and may produce a white mould among the grain. It is the difficulty of making the large pithy cob. in the centre of each ear of southern corn, cure without giving this mouldiness to the grain, that forms the only serious obstacle to this labour saving plan, which also so handsomely increases the bulk of provender, as well as manure; and for myself, I would sooner put off commencing the operation of fodder-saving for a week, than give up the method.

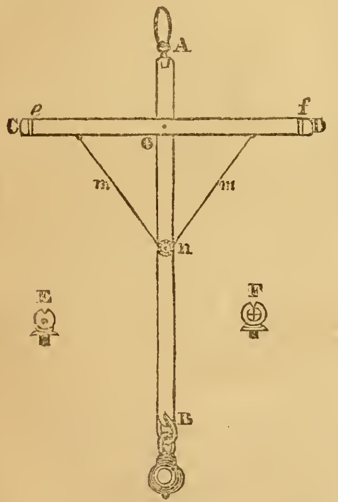
POTOWMACK.

TO THE EDITOR OF THE AMERICAN FARMER.

Essex, *April 8th*, 1822.

J. S. SKINNER, Esq.

Dear Sir,—As the method of cultivating hilly land, by horizontal ploughing, is now coming into very general use; and as its efficacy is often counteracted by the inaccurate manner in which it is executed, and the awkward expedients adopted for levelling the furrows, I have taken the liberty to offer for publication in your paper, the annexed drawing and description of a very cheap and simple level. I proposed it a short time since to a neighbouring farmer, who has tried it with perfect success.



AB and CD are two rules, or light strips of wood of any convenient lengths, say two feet and fifteen inches respectively; crossed and let into each other at right angles, at O, the shorter one being horizontal. At A, there is a loop and ring to suspend the instrument; at B attached by another ring is a lead weight of a few ounces: at e and f, are fixed the sights, E and F, the one next the eye has a small round hole in the centre, the farther one has a large circular hole with cross threads; m m, is a silk or small wire stretched tight and wrapt once around the thumb nut n, by turning which, you can restore the level, whenever the rule CD gets slightly out of the true horizontal line—the sights may be placed on the side of the horizontal rule. To regulate the instrument when it is inaccurate, stand 15 or 20 yards from a wall, look through the sights and let the spot which they strike be marked, then reverse the sights and in like manner mark the spot which they strike directly over or under the first mark; then divide the distance between the two marks, and regulate the instrument by turning the thumb-nut n, until the sights strike the middle mark. As it is difficult to see through the small hole when the sights are reversed, it may be well to have them both of the same height, with a small notch on the top for the purpose of adjustment. A small pin at O, the top of which should be in a line with the centres of the sights, will be of some use in managing the instrument.

In using this level, it is well to have a light staff, 5½ or 6 feet high, with an arm a little more than half as long as the rule CD, fixed at right angles near the top of the staff; the foot of the staff should be sharpened to stick in the ground, and the level when in use may be suspended at the end of the arm by the ring at A, which will give the instrument greater steadiness and relieve the person using it from the fatigue of holding it up. Select some spot, on the side of the hill which you propose to regulate, a few paces from the foot of the hill, and commanding as extensive a view as possible of the ground; set up the instrument, and while you look through the sights, turning the horizontal rule gently around, so as to sweep the whole length of the hill-side, let an assistant with a number of stakes, mark off by your direction the line traced by the sights of the level: when the curvature of the hill is very irregular it will be proper to chop with a hoe the parts of the line between the stakes. Then with a plough, open a furrow along the line thus traced out: lay off a furrow in like manner about mid-way of the hill, and another near the top; which will be a sufficient number of level lines, unless the ground is very uneven. You then proceed to add furrows or rows on each side of the level lines, until the nearest parts of the furrows meet, and the parts of the ground remaining unbroken are to be finished with short rows.

Most respectfully,
Your obedient servant,
J. M. GARNETT, Jr.

Extracts from the last file of the London Farmer's Journal, received at the office of the American Farmer.

EXPERIMENTS ON SALINE MANURES.

Jan. 30, 1822.

SIR,—In The Farmers' Journal of the 7th of August, 1820, a letter was published on the subject of nitre as a top dressing for wheat. We may infer from the reading of the letter, that the writer of it was satisfied in his own mind, that the crop was greatly increased by the application of the nitre; but he does not produce to your readers any convincing evidence that this was actually the case. Without expecting any practical good to result from the use of nitre as a manure, I determined to try its effect as such, and at the same time try other similar substances. Upon beds each a yard square, I last spring sowed a row each of Talavera wheat, barley, and oats: some of the beds were spread over with nitre, in fine powder, in different quantities; the smallest quantity 84 lbs. and the largest 336 lbs. an acre. Other beds were spread over with nitrate of potash, potash, and nitrate of lime, in similar proportions to the nitre. Upon other beds I had salt (as sold at the Salt Works for manure) spread at the rate of from 5 cwt. to 27 cwt. an acre. The salt was put on the beds six weeks before they were sown; the other salts were put on the beds when the grain was up in distinct rows. Soon as a growth of weeds had taken place, I had the intervals between the grain hoed, and sown with clover seed. One bed was sown with grain and clover, in the same way as the rest, but without any dressing whateer. To come at a correct estimate as to the above application, I meant to have had the produce of each bed weighed separate; but owing to the depredations of small birds on the crops, I was prevented doing so. I am, however, quite satisfied, that no benefit whatever was derived from any of the applications; for, at no period of the growth of the crops, did any of them discover superior luxuriance to the bed sown without any manure; and I am equally satisfied, that salt compost, and all the rest of the salts experimented upon, are useless upon my land. I I have not altogether come to this conclusion from the above experiments with the salt compost, as I have used it in considerable quantities, by having it spread upon my land at the rate of from six to twenty hundred an acre; if intended for wheat, it was put on a month before sowing the land; if for turnips, six weeks before sowing. I have also had salt compost put to stable manure a month before putting it into turnip and potato drills, and from none of these methods of using the salt have I experienced either good or harm, except in the instances of its being mixed with the manure; the turnips manured with which made a very poor figure for a considerable time, and had not the season turned out unusually wet, and kept mild to so late a period, the crop, I think, would have been miserably bad; but, owing to these favourable circumstances, it ultimately became nearly as good as the rest of the field; but the potatoes manured with the salt and manure were only about two thirds the quantity, and much smaller in size than those produced in other drills, where stable manure only was used.

Before closing my letter, I will mention a circumstance with respect to the application of nitre to wheat in the spring. Wheat so dressed will, in a short time, become of a darker green than other parts of the field; but this colour gradually disappears, and no increased growth arises from the nitre. I am not philosopher enough to account for this dark colour in wheat, upon which nitre has been spread; but I am not able to bring my mind to think it can possibly arise from increased vigour, but the contrary: my reason for thinking so is, from having observed that the blades of wheat growing from grain that has been steeped in lime water, or a solution of sulphate of copper, being in the early stages of its growth of a darker green colour than from wheat sown without any such preparation; and it is well known, that the vegetative powers of grain are weaker in proportion to the time it remains in such steeps as the above. I remain, Sir, your very obedient humble servant,

R. G.

ON FEEDING SHEEP WITH MANGEL WURTZEL.

Kilmarsh, *Feb.* 18, 1822.

SIR,—With a full conviction that the columns of your Journal will, for some time to come, be filled with matter infinitely better, and far more important and interesting, than it is in my power to offer, I certainly shall be as concise as possible in my rejoinder to what has fallen from your correspondent *P.* in reply to my last letter. Indeed, I should not have troubled you at all, but for the circumstance, that he insinuates a doubt as to the propriety of my addressing him, because forsooth I did not understand him. Now really, I do think it very hard, that I should be thought singular in asking the explanation of a system which, upon a cursory view, seems highly valuable, but, which, upon investigation, I cannot reconcile. Perhaps I shall now incur the imputation of unfairness, if I ask P. what is the utility of giving to the public statements of such a nature, that 19 out of 20 who read them, must pause, and exclaim, "'Tis strange! 'tis wondrous strange!" As, however, he has thought it proper to repeat his original assertion, with only an alteration in the number of the sheep put aside for the experiment, which he now states to be five instead of eight, I shall merely observe, that though I do not doubt *P.'s* word for a moment, there ought to have been an accordance in the two reports; for, if I may be allowed to argue analogically, what respect do we find paid to that witness who varies his evidence with twice giving it? I feel that I have not the most remote wish to hurl *P.'s* opinions into disrepute unnecessarily, and for the sake of argument; but give me systems which carry conviction upon their fronts; not superficial ones, which are calculated to mislead, and to impress the minds of those landlords who read them (and who think with a certain gallant General, that increased production would remedy our present distress,) with the idea that the absence of our prejudices, and the presence of common sense, combined with good management, is only wanted. I know that there are many of the gentlemen just alluded to, who would pronounce, upon the first glance of *P.'s* report, that we might afford to sell mutton at 3d. per lb., if we would only adopt his mode of feeding; without considering the utter impossibility of bringing it into any thing like general, or even limited practice, to be useful. I have now only to add my thanks to *P.* for the account of his mode of cultivating mangel wurtzel, and to subscribe myself, Sir, your very obedient servant,

WM. THORPE.

GROWTH OF TIMBER TREES.

In the first volume of the Bath papers (p. 77. 2d. ed.) there is an interesting letter on the age, bulk, and increase of timber trees, with the measurement of some that are remarkable in different parts of the kingdom. Probably, the instances are familiar to many of our readers, but they cannot fail of being matter of novelty to others; and we give some of the most remarkable particulars in the hope of being able hereafter to throw additional light upon the most interesting part of the inquiry, namely, the progressive increase of timber trees, and the probable age of those which are of very large growth. To this end, if any of the trees are yet standing, and known in the neighbourhood, of any of our correspondents, we shall be much obliged to those who will take accurate measures of them, and transmit the account to the Office of The Farmer's Journal.

Extracts from a Letter from R. MARSHAM, *Esq to* THOMAS BEEVOR, *Esq of Hethel, near Norwich, dated Stratton, October* 1, 1799.

"In compliance with your request, I here send you the measure of some of the largest trees taken by myself, in several rambles about the kingdom. The largest oak I have seen, is that by Cotsthorp. near Weatherby, in Yorkshire, of which the ingenious Dr. Hunter gives a plate in his edition of Evelyn's Silva. The Doctor calls this tree 48 feet in circumference, at 3 feet from the ground; and I found it, in 1768, at 4 feet, 40 feet 6 inches; and at 5 feet, 36 feet 6 inches; and 6 feet, 32 feet 1 inch. To save repetition, 5 feet is the height I always measure at, as easier to see the level of the string, and also being clear of the swellings of the roots.

"In 1759, the oak in Holk forest, near Bentley, was at 7 feet high, 34 feet in circumference. There is a large excrescence at 5 and 6 feet, that would render the measure unfair. In 1778, this tree had increased only half an inch in 19 years. [That is, at 7 feet high, it was 34 feet and half an inch, If now standing, how much has it increased in 45 years?] It does not appear to be hollow, but by the trifling increase I conclude it not sound.

"The Fairlop oak in Epping Forest, seeming sound in 1754, and the Earl of Thanet's hollow oak in Whinfield Park, in Westmoreland, in 1765, were both 31 feet 9 inches.

"The handsomest oak I ever saw, was in the Earl of Powis's noble park by Ludlow, in 1757, though it was but 16 feet 3 inches; but it ran quite straight and clear of arms, I believe near 60 feet high, and had a fine large head." [There were two oaks of this description standing on Lord Carysfort's estate at Elton (Hunts), near 40 years ago; but whether standing yet, we do not know. Three men touching hands could not compass them.] The writer then adds the girth of some trees of other sorts, not needful here to set down and then proceeds:—

"Perhaps an account of the annual increase of some trees will not be foreign to the purpose. It is difficult to discover the age of old trees, as very few planters kept registers of their plantations.

"I have a memorandum of a former rector of Havingham, wherein it is written, that *in* 1610 *he planted two chesnuts by his church porch.*—The largest of these was, in 1778, 14 feet 8½ inches in circumference, or an increase of 176½ inches in 168 years. Supposing the tree to have been 9½ inches when planted, it increased an inch yearly. I have a deed between an ancestor of mine, as Lord of the Manor of Stratton, and his copyhold tenant, upon his inclosing some waste, wherein the abuttal is upon the road leading from Havingham to Norwich. The date is 1580 [at which time the oaks in question were probably planted,] and the largest oak on that bank, at 4 feet, was in 1778, 16 feet 3½ inches, or 195½ inches in 198 years. Now, from the increase of the two last named trees, and the Bently oak, I conclude that the Tortworth chesnut in Lord Ducie's garden in Gloucestershire, which in 1759, at 6 feet high, was 46 feet 6 inches, is not less than 1100 years old; perhaps it may be much older.—Suppose it increased annually an inch and a half the first century, an inch the second, ¾ the third ½ an inch the fourth, and 1-3 the fifth, and 30 inches each century for the next 500 years, as thus:—

The first century,	1¼ inch	125 inches.
2d ditto	1 inch	100
3d ditto	¾ inch	75
4th ditto	½ inch	50
5th ditto	1-3 inch	33 1-3
500 years	32 feet (nearly)	383 1-3
The second 500 years, at 30 inches each century		150
The eleventh century, suppose 24 2-3 inches		24 2-3
	12	558 in.
Circumference in 1759		46 6 in.

"There is a tradition, that this tree was called *the great chesnut* in King John's time; and supposing it grew in the above proportion, it was 500 years old when he came to the throne, and eleven yards in circumference."

The writer adds some other facts to make it probable that the growth of large timber trees is not more rapid than is shewn above: it would very much help to confirm his reasoning, if we could now receive accurate measurements of the trees in question.

Composition for Fences and Weather Boarding. &c.

"Melt twelve ounces of rosin in an iron pot: add three gallons of train oil, and three or four rolls of brimstone; and when the rosin and brimstone are melted and become thin, add as much Spanish brown, red oker (or any other colour you want, first ground fine in some of the oil,) as will give the whole as deep a shade as you desire; then lay it on with a brush, as hot and as thin as you can: some days after the first coat is dried, give it another. It will preserve planks for ages, and keep the weather from driving through brickwork."

TO THE EDITOR OF THE AMERICAN FARMER.

ON TIMBER-CUTTING.

Kingston, Tennessee, March 1st, 1822.

MR. EDITOR—

Since the attention of your readers has been drawn by several notices in the Farmer to the proper season of the year to cut timber for rails or other purposes, I have examined timber that has been cut down in the month of May ten years ago, and the bark taken off it for tanning. I have examined rails cut and put on fences at the same time, and find all these, that any bark is, or was on, are entirely rotten; and from appearances the timber that was barked and more exposed to the weather for years, if now split would last more than ten years more. The season is now approaching which will put it in the power of all wishing to make the experiment to do it; and I hope it will not pass over without a number of them being made. As respects the cutting of timber, if it is hewed immediately, I do not think it material; but if not immediately done, the months of May and June are, from all the examinations I can make, the best time, as then the bark can be easily taken off. The Navy Board will, I hope, make and record their experiments; the very saving of the oak bark, will be worth at —— per year, were all the timber cut at this time. I am told pine timber is, if any thing, more benefitted by it than oak. I would suggest the examination, if in the spring of the year, the heat of the atmosphere does not attract the moisture from the body of the tree to the bark, and that the cold weather forces the moisture or sap, back into the body of the tree again; and that in winter the most moisture is then really in the tree, and farthest from the surface.

Yours, &c.

SAMUEL MARTIN.

TO THE EDITOR OF THE AMERICAN FARMER.

FOUNDER IN HORSES.

Paris, Bourbon Co. K'y.

DEAR SIR—

After a journey devoid of interest, owing to the lateness of the season, I have arrived in Kentucky, and being desirous of communicating a cure for "Foundering," recently known; I make one effort to conduce to the value of your present work, the American Farmer.

One of the writers in your "*Farmer*" calls foundering, "chills and founder," and compares it to inflammatory rheumatisms; I apprehend he does not understand the disease in all its stages;—it evidently proceeds from *surfeit.* A horse rode until heated and fatigued, and fed too plentifully while warm and hungry,—and swallowing his food too greedily, that he may lie down and rest his wearied limbs;—and the stable being wet or damp, and the horse in a copious sweat, are reasons the best that can be given, for the formation of the disease.

Instead of rising up refreshed, the poor animal is stiff and useless. If he had got leave to cool perfectly, and been fed sparingly, he would have escaped *this* sore complaint.

The cure is a lump of alum the size of a walnut, reduced to powder and dissolved in warm water; the horse must be drenched with this liquid, which in a short time will throw him into profuse perspiration, and he will be able to pursue his journey the next day, and if not badly foundered in a few hours.

You will keep it out of sight that this communication comes from a woman, as I wish to escape the

"World's dread laugh, which scarce
"The firm philosopher can scorn."

Yet it is a fact that I always prized fine horses, and endeavoured by every means in my power, to alleviate their pain.

Pray do not put yourself to the expense of sending seed you have to purchase. I hope you received the last seed I sent you enclosed in a letter from Missouri, particularly the "Priarie Sensitive plant" seed.

P. S. The valuable remedy for the founder was communicated by Col. B. Chambers, who experienced its good effect on his own horses, and others.

The authoress of the above is amongst our most valued and useful correspondents, worth a million of indolent *men*, who neither write nor think any thing useful to society—and yet who call themselves the Lords of the creation—acting the while the part of sluggish *drones—fruges consumere nati.*—[*Edit. Am. Far.*

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TO THE EDITOR OF THE AMERICAN FARMER.

Philadelphia, 18*th April*, 1822.

SIR,

The letter of Mr. Isaac Briggs, which is inserted in your very valuable paper of 12th inst. has given me much pleasure, and I wish sincerely that the hints this gentleman has thrown out, might be acted upon; at same time I am sorry to see that he does not allow the very beneficial influence of domestic manufactories on Agriculture, the full weight to which they are unquestionably entitled. He glances at them, as well as at commerce, but the qualifying expression of "while a just proportion is preserved," makes me think that his mind is not fully impressed with the *superlatively beneficial influence* they have on agriculture. If he had taken a more comprehensive and enlarged view of the subject, he would at once have perceived that he has not done them full justice, and as he is a very nice calculator, I am sure the country at large would be much benefitted, if he would enter more fully upon this highly interesting subject.

I agree with Mr. B. that agriculture is our principal concern, and so it will and ought always to be; but I believe at same time that our situation with respect to the export of our bread stuffs, is no longer the same, and this very material point he seems to have entirely overlooked. During the war in Europe, we had certainly a choice of markets for our bread stuffs, and the prices were proportionably high; but the moment peace, tranquillity, order and security were restored, these markets would unavoidably have failed us one after another, if it had not been for the total failure of the harvest in the whole of south western Europe. To this adventitious circumstance alone, it is owing that the ports of Europe were open for us, but surely our agriculture ought not to depend upon such afflicting casualties. We are commanded to build our houses upon rock, not upon sand; following this precept, we must take a higher stand, and rest the prosperity of our agriculture upon firmer ground, than the failure of harvests in Europe. Sound and enlightened policy prompts, and the embarrassed state of their finances, urges all the governments of Europe most imperiously to encourage agriculture within their own dominions by all the means in their power; the regulations and laws of England, France, Spain, and Portugal, bear witness to that; Holland it is true remains open to us, but as she can be supplied on lower terms from the Baltic, the Elbe and the Rhine, we can never expect to find an extensive market in her ports. Under these circumstances, and they are but too true, we have but a slender chance for the disposal of our bread stuffs in Europe.

The same causes will produce the same effects in South America. During the war our supplies were wanted, and found accordingly a market; but peace being restored, for want of an enemy in the field, these markets are likely to fail us too, except in those particular districts, whose climates are unfavourable to the production of wheat; but even in respect to this we have the rivalship of those parts of South America to fear which are favourable to the growth of wheat, and as their population is great, and the soil fertile in the extreme, they may in a short time become very formidable rivals. Until they opposed us in these markets with all the energy of which they are capable, we shall have a sufficient surplus for the supply of all the markets which remain open to us, meanwhile we can clearly perceive that the chances of a regular and steady trade in bread stuffs are rather against us.

But with this prospect before our eyes, it certainly behoves us to look about for a new market, and if possible for a more extensive and more steady one than any of those we are likely to lose. It is strange, but it is not less true, that we have it in our power to create that market within our own country, but deprecate the means to do it. Now I wish sincerely that Mr. B. would be good enough to calculate in what ratio the manufacturing population would increase in the United States, if manufactories were sufficiently protected? what the consumption of the manufacturing population in bread stuffs, beer, whiskey, potatoes, cheese, meat, garden stuffs, milk, &c.—all farm produce,—would amount to? further to what amount cotton, wool, flax, hemp, hides, &c. would be worked up by them, and as all these raw materials come from the farm yard, they ought by all means enter into the calculation. I am bold to assert, without attempting a nice calculation, that the annual sum total, would in less than ten years, be ten times greater than the aggregate sum of our present annual exports of domestic and foreign goods together, by reason that we should then be exporters instead of importers of manufactures. And if we can create such a market within ourselves, a market of which we shall be sure in war as well as in peace, where is the policy to defer the measures, leading to its formation, for a single moment?

The farmers will no doubt remember that during the last short war with England, in which period our manufactories flourished, they were enabled to sell their produce at high prices, although the export, as far as relates to bread stuffs, was annihilated; but they seem to have forgotten that the flourishing condition of our manufacturing population gave rise to that high market, nor do they perceive that these selfsame people, who were then such excellent customers, are now mostly idle, or only half employed, and that many other trades, depending on the manufacturing population, are in a languishing state, and cannot indulge themselves as they certainly would do, if fully employed. Restore them, by protecting duties on foreign manufactures, to their flourishing condition, and they will again be the good customers they were during the war; the price of land will at the same time rise in the same proportion.

But on this subject, I beg leave, to refer you to two most luminous essays, which Mr. M. Carey of this city has written upon the subject. They are entitled:

The New Olive Branch, and
An Appeal to Common Sense and Common Justice, or irrefragable facts opposed to plausible theories.

They are the very best things I have ever read upon this very interesting subject; they contain the soundest doctrines, because they do not deal in theories, but stubborn facts, which leave no doubt upon the mind. Every farmer, nay every citizen of the union, ought to have these two pamphlets in his book case, and read them over and over again.

If you want an illustration of my doctrines, I say, look at England; she consumes within herself every grain her soil produces and every head of cattle it feeds; she does it because she has, besides other unproductive classes, a numerous manufacturing population; she benefits by it, because instead of exporting raw materials, she exports manufactures; in other words, she exports not only her raw materials but also her breadstuffs in the shape of manufactured goods, by which operation their value has been three, five and ten times enhanced. This is the great secret of her prosperity;* now as the same causes always produce the same effects, and as the United States are more favoured in point of climate and fertility of soil, and possess therefore a greater capability for the developement of manufacturing industry (by reason of their producing the most important of the raw materials within themselves) it would be wonderful indeed if the adoption of a

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[*] NOTE BY THE EDITOR,

[*Who will not however be drawn personally into discussions—he leaves that to correspondents.*]

The prosperity of England!!! In what does it consist? none can question the ingenuity of her manufacturers, the genius of her artisans, the enterprise of her commercial men, the inbred and honorable loyalty of her people; but where is her prosperity? Is it enjoyed by the mass of the people employed in any of the branches of trade, art, or industry? The Editor has this very day received a letter from one of the most substantial and intelligent Farmers in England, from which the following extract may be taken, as illustrative of her prosperity.

"I hope no circumstance will intervene to prevent Mr. —— sailing by the Hannibal, Captain Watkinson, which is positively fixed for the 18*th inst. to leave this port for New York, and I hope from the information I have here, there is a chance of his reaching Baltimore before your Agricultural meeting. I assure you nothing would have given me greater pleasure than to have accompanied my brother-in-law, but I find so many things of importance requiring my presence at home, that I must relinquish the journey for the present; but I shall most anxiously await his return to determine as to my future plans, for I assure you I see no prospect of tillage farming answering the spirited agriculturist in this country; rents, tythes and taxes are so excessive, that it is impossible a man can remunerate himself with the low prices, and government appears determined not to protect the Farmer. In short, the National debt will no doubt ruin this country, and the sooner the Farmer withdraws his capital from business, the more he will save of it."*

system similar to hers, should not produce the same beneficial effect in our country!

The great and undeniable politico œconomical truth, which I am desirous to recommend to the most serious attention of gentlemen is, that the impulse given to agriculture by domestic manufactories, is not only much more powerful than commerce can, or ever will be able to give to it, but that it is at the same time more steady, more lasting and more beneficial to the country at large. I do not mean to depreciate commerce, being fully impressed with its importance and beneficial influence on the prosperity of the country, but I contend that it does not rank above manufactories; besides, *est modus in rebus*, not every branch of commerce is equally beneficial to the country, some branches of it may even be detrimental. Let us look a little closer at this matter! Is it, I ask, beneficial to export raw materials and to re-import them again in a manufactured state? In that case we give the labour of 3, 4, 5, yea, of ten men, for the labour of one, according to the quality and finish of the manufacture we import; the answer must therefore be that, although beneficial in a certain degree, it is by no means the most beneficial method to increase our private wealth and national power; moreover if you import manufactures to a larger amount than that of the raw materials exported, the balance must be paid in specie, and you deprive yourself of your gold and silver, as it happens at the present moment. Again let me ask, is it benefical to export manufactures and to import raw materials which our own country does not produce, such as cochineal and other dye stuffs, &c. In this case you export in the shape of manufactures not only the raw materials of your own growth, but also the bread, meat, milk, cheese, beer, &c. by which your manufacturing population has been fed—per contra, you import raw materials which nourish and infuse new life into your manufactories, and the balance you get in gold and silver; the answer therefore to this question must be: Certainly this is the best method to set about the business. Now if this happened to be the character of our general trade, the trade carried on with China might be beneficial, as it would give vent to our supplies of silver, whilst the goods imported from China would furnish us the means of making exchanges with some of the European and South American nations; but, situated as we are, no man will pretend to say that the China trade, although beneficial to the few that are engaged in it, is beneficial to the country at large, seeing that it inundates us with Chinese silks and Canton crapes, which are but a sorry equivalent for that silver, of which we stand so much in need for the sake of a healthy circulating medium.

It may be objected that this plan is inimical to commerce, and that its channel will be narrowed, if domestic manufactories are encouraged; but this objection is without foundation, although it cannot be denied that the importation of foreign manufactures would decrease; on the contrary, the greater internal circulation of the raw materials, of indigo, cochineal, and other dye stuffs, of the half manufactured articles, such as cotton, woollen, flaxen, and hempen yarns, and lastly of the manufactures themselves for home consumption and exportation, will employ our merchants more fully and more beneficially than the export and import trade, as it is now carried on. The import trade in manufactures will gradually decrease, but I see no reason why the export trade of cotton and tobacco should decrease; there is an absolute want or demand for these articles in Europe, we shall therefore have the same sale, whether we manufacture our own cotton, woollen, and silk goods, or not; Bonaparte could neither dissuade nor frighten the people of Europe out of the use of coffee and sugar, and who is now to prevent them to use cotton and tobacco? Is England to prohibit our cotton? No! she is sadly in want of them to nourish her manufactories. Is she to prohibit our tobacco? No! no! she would lose one of the best feathers out of her cap, as tobacco pays a tremendous excise duty, of which she cannot afford to lose a single shilling. As to our export trade, our merchants have but a very limited number of domestic articles to tempt fortune with and to exercise their skill and activity upon, but if we had extensive manufactories, a subdivision beneficial to all would take place, as it is the case in England; some would persevere in the old track, others, by giving their attention to the internal trade, or the circulation of the above named articles, would retreat from the arena and leave the first class in the sole, quiet and undisturbed possession of it; others again would altogether withdraw their capital from commercial pursuits and invest it in manufactories, and by this second secession of a part of our mercantile body, those who stick to the old beaten ground would be still more benefited.

The false and pitiful policy, by which our manufactories have been oppressed and partly ruined, comes now home; if they had been duly encouraged, the seven years which have elapsed since the return of peace, would have improved and matured them, and we should be enabled to cope with the manufacturers of the old world in the lucrative trade they are going to enjoy with the rich provinces of South America. How merrily might our raw materials, larded with beef, pork, bread, &c. find their way to South America, in the shape of North American manufactures, but as we have no such thing, nor any thing else to offer to the nations of the south in exchange for their produce, we are condemned to be lookers on, whilst others taste the sweets of this Eldorado to their hearts delight! This is very mortifying, but true!

The cotton planters are apt to think that, if the importation of manufactures should be checked, a countervailing duty would be laid on cotton wool in England. This is a groundless apprehension. The manufactories of England are her main prop, particularly under the existing circumstances, which are silently, but most effectually preparing a complete revolution in the agriculture and landed property of the country, and as she has the rivalship of the prosperous and growing manufactories of France to fear, she dare not burthen the raw material any more; in short, so long as there are manufactories to a great extent in England, she must have our cotton, and if she taxes it heavily, the French and Germans will under sell her.* But England strains every nerve to produce the whole supply she wants of this raw material, in her East Indian possessions; if so, let the cotton planters divest themselves of their groundless apprehensions, let them look about for a new market! If the market they have found in France since the restoration of peace is beneficial to them, would not a market at home be more beneficial as it is not liable to be interrupted by war, and as it would and could some years hence consume their whole annual crop? This state of things deserves serious consideration! It is now in the nick of time to do something for our manufactories, else the disappointment might be more serious than in the case of South America.

One word more respecting agriculture, and I have done. If the manufactories flourish in the country, we shall want prodigious quantities of madder, woad, indigo, and other dye stuffs, as well as rape and linseed oil; we shall also want raw silk; all this may be raised in the country, and another wide field opens to agricultural industry.

Mr. Editor! if you think these few hasty remarks worthy of a place in your paper, you will oblige me by an early insertion.

I am Sir,
Yours, &c.
FRANCIS VALCK.

John S. Skinner, Esq.

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* *The immense freights paid to neutrals during the war, to fetch cotton from Amelia Island, are another proof that she cannot do without our cotton.*

FREDERICK COUNTY CATTLE SHOW AND FAIR.

At a meeting of the committee of arrangement, on behalf of the *Frederick County Agricultural Society*,

It was resolved, To distribute premiums, amounting to $102, at the Cattle show and Fair, to be held on *Thursday and Friday the 23d and 24th* of *May next*, at the *Monocacy Bridge Hotel*, two miles below Frederick-Town, on the Baltimore turnpike road, in the following manner, to wit:

For the best	Stallion	$15
ditto	Brood Mare	10
ditto	Bull 18 months old	15
ditto	Bull less than do.	7
ditto	Cow	10
ditto	Heifer	5
ditto	Ram full bred merino	5
ditto	Common do.	5
ditto	Pair of ewes	5
ditto	Boar	5
ditto	Sow	5
ditto	Litter of pigs, not less than seven in number and not less than 3 months nor more than 6 months old	5
ditto	Yoke of working oxen	10

Ordered, That all the stock to be offered for premiums, must be on the ground, and reported in writing to the secretary, at or before 9 o'clock, on the first day of Show.

Ordered, That all stock, offered for premium, must have been raised in or intended for the improvement of the stock in this county.

The committee regret they cannot offer at this time premiums for implements of Agriculture; they however confidently invite the exhibition, with a view to the inspection of the public, and for sale.

Ordered, That a sale of stock and Agricultural implements will take place on Friday, the second day of the Cattle show and Fair, at 10 o'clock.

WILLIAM E. WILLIAMS,
Chairman.

FOR THE AMERICAN FARMER.

Mr. Skinner,

I hope your note on a short piece on millet, published in the Farmer, April 19th, will induce those who publish their experiments, to describe the kind they cultivate.

I presume Dr. Coleman's is not the kind I have sown; he says it ought to be *planted* in rows, four feet apart, and the plants from 12 to 15 inches in the drills, and that it requires as much work as corn; its produce 21 bushels seed to the acre; but he says nothing about hay or fodder. In the Farmer of March 16, 1821, a writer says, Dr. Coleman's produce of seed per acre, was not half equal to many crops he had seen, and that from 2½ to 4 tons of provender are produced on a tolerable good soil—but he does not say where? Quere—is this the kind Dr. Coleman cultivates? In the Farmer of January 12th 1821, it is stated by Mr. Reeder, that one bushel of seed sown on four acres of ground, produced about 75 bushels of seed, and 6 tons of hay: this I presume is different from Dr. Coleman's, and perhaps is the kind I have sown.

There is a trifling error in a short piece published in the Farmer of April 19th, in line 20th, for "soon thick enough," read *sown thick enough*; and in the 3d paragraph I meant to say, *if my small experiment is a just criterion to fix its value, I regret very much that I have not had an opportunity of proving its value before I read your publication.* I hope I can now always have a sufficiency of hay, even if clover fails, for it will be time enough to sow millet, after the fate of the clover crop is ascertained.

A.

AGRICULTURAL MEMORANDA,

NOTICES TO AND EXTRACTS FROM CORRESPONDENTS, &c.

QUERY BY A SUBSCRIBER.

☞ In the essay on manures by Arthur Young, lately published in the Farmer, it is stated as being necessary, when ploughing in long manure and green crops, to add a "skim coulter to the plough:" quere—have any of our readers seen such a coulter in use, how is it made, and how and where is it attached to the plough? a description with a drawing if necessary to understand it, would be acceptable.

☞ Jacob Herrington, Esq. promises to communicate the result of trials to be made by him, in the N.W. corner of Pennsylvania, of rare seed sent to him by the Editor of the Farmer, and of Chile wheat from Mr. Raguet, of the Senate of Pennsylvania. He gives the weight of one of his *pigs* —615 pounds.

☞ Mr. Law, President of the Prince George's Agricultural Society, is of opinion, that the ashes of burnt clay, will keep off the cut worm from corn; and subsequently to the communication of that belief, refers for authority and confirmation to the New England custom of sprinkling ashes on the young corn, as indicated by the lines of the Poet,

"A little ashes sprinkled round the spire,
"Soon steep'd in rain, will bid the worm retire."

He sent the Editor several grains of corn found in his field in which the worms had "their fangs so closely fixed that the overseer in lifting the corn drew up also the cut worm." These grains have had their *hearts* cleanly scooped out, and look for all the world as if they had been visited by *ground mice;* it only shows that the cut worm as well as the mouse has a *sweet tooth* in his head.—Mr. Law, whose mind is ever active, has discovered that his chickens are devoured this year by the hawk, in consequence of the removal of his kitchen, and with it the *martin*, the dreaded enemy of the hawk.

☞ An essay signed J. W., on Indian corn, is received. The substance of it may be given in few words; he condemns high ridges and water furrows, recommended by Arator, because, when the roots have extended to the water furrows in search of food, they are there arrested in their progress, and cease to gather nourishment for the plant, at the very season when it is most wanting to perfect the ear, hence the ears are small, and the crop diminished; he would recommend a level surface.

☞ The Essay of Mr. Minor has been so often and so highly spoken of, that, at the suggestion of many friends it is published in pamphlet form with notes by the Editor of the "*American Farmer*," and is for sale at the Office of the American Farmer, by Wm. F. Redding, and by the Booksellers:—*price* 12½ *cts.*

☞ An account of a *test* by which the quality of plaster of paris can be ascertained would be useful.

☞ Within 4 miles of this place* I am now offered a tract of land for about 450 dollars, that ten years ago sold for $3500; on examining it there is not sufficient good rail timber to fence it with; what is the result? it is now lying an entire waste. Don't this look strange in a country of about 25 years settlement? and it is on the great western road also.

☞ By an arrangement with his Printer, the Editor compounds to send every article to the press in a state *prepared for publication*, as to spelling, diction, &c. &c. so that the Printer is responsible only for *following the copy*. Hence correspondents will see the necessity of sending their communications in a fair hand and at least *correctly spelled.* The Editor has not time to *make copies*, which in some cases is absolutely necessary, from the number of the writer's errors, even where the *matter* is good. It would be unreasonable to expect him to do it, and impossible for him to accomplish it.

☞ Spirits of turpentine (says a N. C. correspondent) in small and repeated doses has been employed in cases of dyspepsia with advantage—he recommends it in conjunction with RYE COFFEE, milk, exercise, (not locomotion, but positive labour, such as sawing wood or holding the plough) a sore back, &c. &c. I fear, says he, your devotion to *our* interests deprives you of exercise and an early bed. There are many items which go to constitute health, and none should be neglected.

☞ *A correspondent at Winchester, Con. under date of May 1, says respecting,*

MERINO SHEEP AND WOOL.

We have known of but one lot of full blood merinoes being sold this year, and these were a very fine lot of 100, chiefly ewes, which brought $10. They are scarce, more buyers than sellers. Nice lots of wool bring from 75 to 83 cents the pound.

We observed in your last paper, a request from Jonathan for information respecting actual experiments made in this country with regard to the *North Devon Cattle*. We purchased a Devon bull calf of Mr. Pattison of Baltimore, in the fall of 1820, we put him to an ordinary sized cow, the next spring, which produced a beautiful half blood calf of a mahogany red colour, which at seven months old weighed 616 lbs. and on the 16th day of February last when he was one year old, weighed 812 lbs. He had the full milk of the cow three months only, and no extra feed. The above mentioned calf we sold to Mr. Henry Herdson of Hartford, at the cattle show last fall who now owns him.

SAMUEL HULBERT & Co.

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* *Kingston, Tennessee.*

THE FARMER.

BALTIMORE, FRIDAY, MAY 17, 1822.

☞ The Editor is authorised to assure the publick that an opportunity will be presented at the cattle Show and Fair, on the last two days of this month, to purchase choice breeding stock of every kind.—Horses, neat cattle, Bakewell sheep, hogs, &c. Let farmers therefore who wish to improve their stock *come prepared*: and is there a farmer, who pretends to cultivate his own land, so destitute of ambition (to say nothing about self interest) as not to feel a pride to excel in the quality of his live stock? Is it not as *cheap* to keep a *good* animal as a bad one—and then is it not a source of great pleasure even to the eye, to have in our fields and stables animals of fine symmetry, of thrifty constitutions, possessing and supplying in the highest degree the qualities for which they are kept—fine action in the horse—docility, early maturity, and much beef of best quality in the ox—cows of the *fill-pail* breed, &c. &c. All agree that it is desirable to have such animals, but many farmers are too miserably penurious, too penny-wise pound-foolish, to pay any thing like their value for breeding stock.

☞ In the 2d Vol. of communications to the Board of Agriculture, Sir Charles Middleton, Bart. answers some queries relative to his Farm, at Jeston, in Kent.

A satisfactory reply is here given to each question; and the conclusion of the whole is, that, though in raising to high condition a farm which had been much neglected and *out of heart*, the occupier may at first be materially *out of pocket*, the result of a series of years will be highly advantageous. A considerable capital, however, is requisite to bear the drawbacks.—The Jeston farm contains 250 acres, and Sir Charles states that, in the first year of its falling under his management, the whole amount of the produce consisted of two loads of hops per six acres, forty one quarters of wheat, (328 bushels); twenty seven qurs. of barley, twelve of peas, and thirty loads of hay and clover; value in all, six hundred and ninety four pounds British; whereas, he adds: "I have had on the same farm, in its improved state, nineteen loads of hops, one hundred and thirty quarters of wheat, thirty seven of barley, one hundred and thirty seven of beans, five thousand two hundred and forty bushels of potatoes, and eighty three loads of hay: value in all, four thousand two hundred and twenty seven pounds British."

PRICE CURRENT—CORRECTED WEEKLY.

Flour from the wagons, superfine $6 62½—Wharf do. $6 37½ to 6 50—Wheat white, $1 44 to 146—Red, do. $1 40 to 1 144—White Corn, 78 to 80 cts.—Yellow, do. 71 to 75—Rye, 70 to 75—Oats, 40 to 45—Whiskey from the wagons 32 cts.—Shad No. 1. trimmed, $7—Do. do. No. 2, $6—No. 1, untrimmed, $5 75 to 6—No. 2, do. do. $5—Herrings, No. 1, $2 25 p. bbl.—No. 2, do. $2—Whiskey, 33—Rice, $3 25 to 3 50—Apple Brandy, 36 cts.—Peach, do. none—Tar, N. Carolina, $2 25—Rosin, $2 25—White pine boards, per M $10 to 30—Pitch pine boards, $10 to 30—Beeswax, 37½ to 40 cts.—Beef, Baltimore mess, No 1, $8 to 8 50—No. 2 do. $6 to 6 50—Pork, mess do. $13 to 13 50—prime do, $11 to 11 50—Bacon, hams, 10 to 12½ cts.—Middlings, 7 to 8 cts.—Lard, 8 to 9 cts.—Candles, New England, 16 to 19 cts.—Salt, Liverpool coarse, 50 to 55 cents—Turks Island 65 to 70—St. Ubes, 53 to 55—Sugar, Havana, brown $9 to 9 50—White do. $13 to 13 50—Coffee, (W. I.) green, $28 50—St. Domingo, $26—Molasses, (W. I.) 30 to 32 cts.—Soal Leather 28 to 32 cts.—Rough, $4 50 to 5 per side—Butter 25 to 37½—Eggs, 10 to 12½ cts—Live Cattle, $5 to 6—Beef, prime pieces, 8 to 10 cts.

MARYLAND TOBACCO, one parcel raised by Nathan Hammond, of Frederick, sold the last week for $18 and 25—inferior qualities same as last report—very dull.

VIRGINIA TOBACCO—no sales.

PUBLISHED BY JOHN S. SKINNER.

AGRICULTURE.

ADDRESS

Delivered before the Philadelphia Society for promoting Agriculture, at its annual meeting on the fifteenth of January, 1822. *By* Nicholas Biddle, Esq.

At a meeting of the "Philadelphia Society for promoting Agriculture," held 1st mo. 15th, 1822:

The annual address was delivered by Nicholas Biddle, Esquire:

Whereupon, *Resolved unanimously*, That the thanks of the Society be presented to Nicholas Biddle, Esquire, for his eloquent oration this day pronounced, and that he be requested to furnish a copy for publication.

From the Minutes.
ROBERTS VAUX,
Secretary.

ADDRESS.

Mr. President, and Gentlemen
of the Agricultural Society.

I congratulate you on the return of this anniversary of our Society. I rejoice with you that another year has been added to its long career of usefulness—and that, as the occupations of this day prove, we are prepared to resume our labours with undiminished zeal and increased resources. It is now nearly forty years since a few sagacious and distinguished gentlemen, who had honorably served their country during the war, wisely judging that its prosperity in peace eminently depended on its agriculture, laid the foundation of this institution, the first, and for a long time, the only Agricultural Society in America. From that period to the present day, its members have been unwearied in cherishing the best interests of the nation. An extensive correspondence with the enlightened farmers of Europe—the introduction of the latest writings—of the most improved implements—of new varieties of plants—and the best breeds of animals, gave them advantages which they have imparted to their countrymen with a liberality worthy of all praise.

From these efforts they have reaped an abundant harvest. They may find it in the distinction which their labours have acquired among the agriculturists of Europe—they may find it in the homage which every section of the union is offering to the Society, by following its example—they may find it under a far more delightful form, in the satisfaction of having contributed to the advancement of their country, which has presented a scene of agricultural prosperity, such as was never before given to the hopes of men. These are natural and gratifying reflections. It will, however, better accord with the unassuming and practical character of the Society, if instead of indulging in personal feelings, we endeavour to make even this meeting not wholly unprofitable, by an attempt, necessarily hasty and imperfect, to compare the situation of the best cultivated parts of Europe with our own—to observe the means of improvement which the examination presents—and to suggest such topics as may recommend the pursuit of agriculture in Pennsylvania.

In this inquiry our curiosity is naturally first attracted towards those distinguished nations in the south of Europe, who after filling the world with their fame, have passed away, bequeathing to posterity some of the noblest works of genius, and the purest examples of human character.—Undoubtedly in all that remains of them, we may trace the evidences of strong attachment to rural life, and an exquisite perception of its enjoyments. Undoubtedly the cultivators of the soil were among the most distinguished citizens; and the pursuits of agriculture have rarely been embellished by so much eloquence, or sung with so much enthusiasm, as by the great writers of antiquity. But this intellectual enjoyment of the country may well consist with an imperfect condition of husbandry. The natural feelings belong to all times, but science is necessarily progressive; nor does it detract in any degree from the merits of the farmers of ancient days, that in an era of comparative infancy, in the physical sciences, they were not advanced beyond the knowledge of their age. I incline to think then that our natural reverence for ancient nations, has exaggerated the value of their agriculture, and that a deliberate examination of their history and their writings, is calculated to lower the general estimate of the scientific management of their lands.

Thus the most distinguished people of antiquity, the Athenians, were extremely attached to the country life; yet their agriculture must have been imperfect. Attica is a small, ridgy, poor district of land, about one-third as large as the neighbouring county of Bucks, with a very light calcareous soil, so dry, that it would not yield pasture to support the cavalry employed in its defence, and so unproductive, that it did not afford grain enough for the subsistence of the farmers themselves. Its supplies of grain were annually imported, and its chief produce appears to have been then, as it is now, the honey from its hills, and the olive which delights in its thin dry soil.

Their great rivals occupied a larger, and rather a better country, but their habits and their institutions estranged them totally from the cultivation of it. The territory of Sparta was divided into small lots, each yielding about 70 bushels of grain, with a proportion of wine and oil; and these were cultivated, not by the owners themselves, who disdained the pacific labours of husbandry, but by a class of people, half slaves and half tenants, who gave a fixed proportion of the produce to the landlords. Such a state of things must be inauspicious to agriculture; the frugality of the owner being satisfied by a very moderate production, and the depressed condition of the tenant, rarely giving him the means or the wish of improving his farm. The rest of the Greek states seem to have supplied their own consumption; but this is probably an evidence rather of their temperance, than their skill, and the observation of one of their best farmers, Xenophon, that agriculture is the easiest of all the arts, and readily acquired by a little attention to the execution, reveals better than any collection of facts, the true state of Greek husbandry; particularly as it is confirmed by the remains of all the georgical writers of Greece, which have reached us.

We have ampler information with regard to the ancient state of Italy. The institutions and the manners of the early Romans were singularly favourable to agriculture. The extreme subdivision of the soil, cultivated by the proprietor himself, seems to present the strongest incentive of necessity and interest to good husbandry.—Thus the first allotment to each individual was two acres.* How long this limitation continued, is unknown; but, on the establishment of the republic, 245 years afterwards, the limit was fixed at seven acres.† This, like all unnatural arrangements which restrict human industry, gave way before the progress of wealth and inequality; for, in about a century and a half, a law prohibited the possession by any individual of more than five hundred. But the change of [illegible], the infatuation of power, above all the introduction of slavery, rendered it difficult to enforce these restraints, and the career of this inequality did not stop till, as is confessed by Pliny, the extensive estates had destroyed Rome and the provinces, and one half of Africa was owned by six Roman families the chiefs of whom Nero destroyed. In the progress of these changes, the best remembrances of the Roman power, as well as the highest advancement of its agriculture, are connected with the period immediately succeeding the formation of the republic, when the allotment of seven acres continued to be generally maintained, and it was deemed wrong in a senator to possess more than fifty. It was during this period that the farm of Cincinnatus consisted of four acres, the other three having been lost by his becoming security for a friend. It was then that Curius, on his return from a successful campaign, refused from the people a grant of fifty acres, declaring, that he was a bad citizen who could not be contented with the old allowance of seven. We cannot doubt that this subdivision of the soil required good cultivation to satisfy the wants even of the most frugal. But in the days which are cited as the most distinguished in her history, when Rome spread over Italy and almost all the ancient world—the substitution of slaves for free labourers had given a new character to agriculture. In that period almost all Italy was cultivated by slaves—not like that unhappy class of persons in our time, whose misfortunes are alleviated by tenderness, and whose increasing numbers are at once the evidence and the reward of humanity—but by male slaves brought from the provinces, whose waste, as they possessed no families, was constantly recruited from the remote parts of the empire. Their numbers must have rendered them formidable, for they seem to have worked, like modern galley slaves, in chains;—they must have been treated with great harshness, since, among other proofs of it, Cato recommends, as a matter of course, to every good economist to sell off his old wagons, and tools, and cattle, and his old and sickly slaves—and their labour could not have been very efficient as the allowance for a grain farm of 125 American acres, a great part of which was of course in fallow, was eight men.

Accordingly, there are two facts decisive as to the general productiveness of land. The first is, that as the almost universal system of farming was by alternate crops and fallows, nearly one half the soil must have been always unemployed. The second is, that the average produce of Italy, in the time of Columella, was only four times the seed—two circumstances which do not now concur in any well cultivated country.

Nor do the agricultural writers inspire more favourable opinions. The works of Cato, of Varro, of Columella, of Virgil, of Palladius, and of the writers whose fragments are contained in the collection ascribed to Constantine, present, it is true, the most curious details of ancient husbandry. There is much excellent sense, much admirable practice, many processes which might furnish suggestions for modern improvement; but farmers who resort to them for instruction, will rise I think from the study, with an impression, that their agriculture was governed by practices rather than principles; and that there is wanting that knowledge of the processes of vegetation, the composition of soils, and the rotation of crops which have given to modern farming its dignity and value. Even these useful practices too, are often disfigured by a fantastical mixture of superstition and empiricism. When, for instance, we read in Cato a minute description of an incantation, by which the dislocated bones of a farmer may be charmed back into their places—when Columella directs us to save our vines from mice, by trimming them at night during a full moon—when Sotion declares that an effectual mode of extirpating broom-rape from the fields, is to draw on five shells the picture of Hercules strangling a lion, and bury one in the middle and one in each corner of the field—when Democritus will ensure us a thriving garden, if we bury an ass's head in the middle of it—when some of the most sober writers gravely describe the remedy by which the broom rape may be driven from all fields, and caterpillars banished instantly from gardens, which was to make a barefooted, half-clad woman, with her hair dishevelled, walk three times round it—when these, and many similar directions are given by the great masters of the science, they must be received as evidences of its extreme imperfection. Indeed, no one who will compare the rude plough of the Romans with the admirable instruments of France and England, or will contrast the writings of Columella and Sir John Sinclair, can fail to acknowledge how much science and the mechanic arts have contributed to agriculture.

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* *About one acre and a quarter American measure.*

† *Four and one-third acres American measure.*

We may derive more instruction from their descendants. So naturally do our recollections dwell rather on the past than the present Italy—so much more are we attracted by its ruins than by its prosperity, that we have not sufficiently admired its agriculture. Yet Italy is probably at this day the best cultivated country in Europe.—It supports from its soil a population greater in proportion to its extent than any other; and such is its admirable system of culture, so triumphant its industry, that, though suffering from the worst of all evils, oppressive and profligate governments—although a great extent of country, not less than 200 miles long, and from 25 to 60 miles wide, is in a considerable degree lost to cultivation, by the malaria, which has depopulated the fairest part of the old Roman empire; still the absolute amount of its produce was never perhaps greater than at present. They have accomplished this, by substituting for the long fallows of antiquity a judicious rotation of crops, and by terracing the feet and sides of the mountains, so as to render them eminently productive. The minute division of the soil forms the peculiar feature of its agriculture. When the influence of Christianity had abolished slavery, the manumitted slaves, who were then the only labourers, became tenants, and have so continued to the present day. Five-sixths of its population are small farmers, working the land on shares of one-half or one third. These cultivators of a few acres have rendered their country so fertile, that from one end of Italy to the other—from the irrigated meadows of Lombardy to the volcanic regions of Naples, if we except some parts of the Pope's dominions—there is scarcely a single spot which does not produce the utmost which its situation and natural fertility admits. The eye rests with delight upon the magnificent prospects of Piedmont and the Milanese; on that busy scene of industry, which sustains a population of one person to every two acres—where three-fourths of the gross produce is disposable, and where the fields are constantly covered with a succession of varied and abundant harvests. The district near Vesuvius has a population of 5000 souls to the square league, a proportion unknown to any other part of Europe: while in Sorrento, their rotation of eight crops in five years, and one of them a cotton crop, is pronounced by a competent judge to be "the best managed and the most productive of any in the world."

It is however rivalled, if it be not equalled, by many parts of Flanders; where from a soil more fertile than Italy, though in a climate less genial, they extract from their land by industry and the application of manures, a rapid succession of crops, probably not inferior to those of any other country. The details of Italian and Flemish husbandry—the Italian rotation of crops, and the Flemish management of cattle and manures—are worthy of attentive study by all in this country, who would improve in scientific farming. They would often suggest modes of culture, better adapted to our climate than the practices of England, which we are too prone to follow without making allowance for the essential difference between the seasons of the two countries.

The general cultivation of Great Britain is calculated to inspire a mingled feeling of admiration and surprise: of admiration at what she has accomplished, and surprise at what she has neglected. She has many advantages: her exuberant capital, her commerce, her manufactures, furnishing to agriculture so large a body of domestic consumers, have enabled her to cover a large portion of her soil with a picturesque and beautiful cultivation, which no stranger can contemplate without satisfaction. Yet a nearer inquiry excites astonishment, that this very success has not induced a more enlarged and better husbandry.

There is an extraordinary difference in the calculations of British economical and statistical writers on that subject; but the safest estimates show, that a proportion of from one-third to nearly one-half of the surface of Great Britain is waste and almost unproductive. Of these waste lands, it is again estimated, that one-fourth or one-fifth might be enclosed and cultivated, and the rest employed for sheep or for planting timber. The consequence is, that she does not raise grain enough for her own consumption; the average importations of wheat and wheat flour, during the last twenty years, having been about four millions of bushels a year, amounting to nearly thirteen or fourteen days consumption. Whether it be desirable to resort to the waste lands to supply this deficiency, is a question of domestic policy which it is for her alone to decide. But even a stranger may be allowed to perceive, that, without abstracting capital from other pursuits to reclaim waste lands, the deficiency of England might be readily supplied by the simpler process of a better husbandry on lands now under cultivation. "A very small portion," says one of her best authors, Dickson, writing in 1804, "a very small portion of the cultivated parts of the island has, even at this advanced period, been brought under a judicious and well conducted system of husbandry. Immense tracts of land, of the more rich and fertile kinds, may be still met with in different parts of the kingdom, that are managed in very imperfect and disadvantageous methods of farming;" and he adopts the calculation of Sir John Sinclair, that 30 millions of acres are either in a state of waste, or cultivated under a very defective system of husbandry. Even still later, in 1812 and 1816, we learn from the valuable writings of Dr. Rigby, that some of the very counties which Dickson considers as the most perfect, are still very deficient: that "in Essex the wretched system of fleet ploughing and whole year fallows is still pertinaciously adhered to"—that Sussex "is behind almost all others, at least half a century"—that in Cheshire the antiquated system of a century back still prevails—that Shropshire is subject to a very inefficient cultivation; and that in short "a great part of the kingdom is in a lamentable state of agricultural unproductiveness." Some of these defects are the result of ignorance and prejudice. With all the splendid success of Mr. Coke, of Norfolk, in rendering his land nearly ten times as productive, he used the drill husbandry for sixteen years before any individual followed his example; and even now his improvements are supposed by himself to extend about one mile in a year. Other causes, however, are not wanting, and some that to us seem almost incredible. For instance, nearly one-half the arable land of England is held in common; its culture is therefore subject to restrictions either of custom or law, and the portion of each commoner is often so arranged, that he cannot cross-plough his land for fear of trespassing on his neighbour. These, it may be easily imagined, do not produce more than half the value which might be drawn from them, by enclosure and exclusive possession. Again, the fault which is constantly deplored by her writers, and one that seems peculiarly strange where the economy of human labour is so well understood, is the superfluous expense of cultivation by the multitude of horses. It is at this day common in England, to see four, five, and six horses following each other in single file, before a plough, in fields of a few acres, and in soils where two horses might easily accomplish the work; to see teams of four horses employed, where two would be quite sufficient; and this notwithstanding the successful introduction of the Scotch mode of ploughing, as in this country.—The consequence is, that England and Scotland are estimated to contain 3,500,000 horses, consuming the value of 450 millions of dollars, and the produce of sixteen millions of acres, being nearly one-half the productive lands of the kingdom. The condition of a large proportion of the tenants too, is, in many respects, unfavourable.—The soil of England is owned by about 40,000 persons, and a greater part of the leases are at will, or for a short term from five to nine years, the better policy of long leases not having yet became general. Lastly come the tithes and taxes; the tithes, which take from three fourths of the occupiers of land in England and Wales, one-tenth of the gross produce, even when the remainder may afford no remuneration for their labours—and the taxes which, combined with the tithes, on an average amount to more than one-half of the rent.

However consoling these views may be to our own faults, it is more agreeable to dwell on the pleasing side of English farming, and to derive instruction rather from their success than their misfortunes. And truly there is something admirable in the generous and buoyant and elastic spirit with which the genius and industry of that country have upheld its agriculture, under a complication of burdens, such as never before pressed on the soil of any country. By her peculiar condition—by the poor laws—the tithes—the taxes of every description, England was reduced to a condition which demanded all the energies of the farmer, and tasked to the utmost every resource of capital and invention. On a moderate computation, an acre of the best farming land, in order to repay with profit the labours of cultivation, must yield about thirty or forty dollars: and accordingly it was made to produce that sum.—By liberal investments of capital, by judicious and economical husbandry, they have extorted from a soil not naturally distinguished for fertility, and a climate inconstant and treacherous, an amount of produce which enabled the farmers of England and Scotland to pay a higher rent than is yielded by some of the finest soils of Italy. If indeed we were to select any district where skill and capital have been most successful against natural obstacles of climate, I incline to think we should name the Lothians of Scotland.

That the example of these countries may not be lost to us, we should habitually compare them with our own. It is now about a century and a half, since the people of the United States have been principally occupied in reducing to cultivation their extensive forests. Their agriculture bears, of course, the impression of their circumstances. While land was cheap, and capital small and labour dear, it was more natural to reclaim new fields than to restore the old, and to diffuse over a wide surface of cheap land the greatest power of dear labour. The growth of cities—the creation of new classes of society—the increase of manufactures, have now concentered our population, and by the formation of a permanent home market, are calculated to give a new character to our farming. In venturing upon that subject, it is fit to speak with entire freedom. The object of our society is our improvement. Instead, therefore, of dwelling upon the merits of our farming, which is in many particulars deserving of great commendation, I shall prefer the less agreeable office of indicating the means of its advancement, believing that the humbiest exercise of patriotism is, to praise our country without striving to improve it.

The condition of the soil of Pennsylvania may be examined, first, in relation to its uncultivated land, and secondly, with regard to its husbandry.

According to the opinion of a very distinguished geologist, Mr. Maclure, Pennsylvania contains more good land than any Atlantic state in the union; that is, she possesses a greater extent of that formation—the secondary—which from its position, the course of its rivers, and the mineral deposits which belong to it, is best calculated to sustain a numerous population. These advantages, it must not be dissembled, have not attracted their due share of attention. I incline to think that the best portion of Pennsylvania, that which is destined to act hereafter the most distinguished part in our agriculture, has never yet felt the plough. It is indeed lamentable to see so much of this long-established state totally abandoned—to look at extensive tracts of rich country without a road or an inhabitant—to meet, almost in the heart of Pennsylvania, the Seneca Indians from New-York, hunting through a wilderness of nearly a hundred miles in extent, with less interruption perhaps than they would have found two centuries ago. There are seventeen adjoining counties, north and west of the Susquehanna, containing an extent of more than 18,000 square miles, with a population of about six souls for every square mile. There are five adjoining counties, containing nearly 6,000 square miles, without one inhabitant to the square mile. There are three adjoining counties, more than 3,500 square miles in extent, with only one human being for every two and a half square miles. I seem to be speaking of some desert on the Yellow Stone, not of a fine region within four days ride of Philadelphia, which was possessed in full sovereignty by Pennsylvania more than sixty years ago—an antiquity in this country—a period when the great empires of the west, Ohio, Kentucky, and Indiana, who will outnumber Pennsylvania in the next Congress, were not among the prophecies of men. There is no example among the old states of a wilderness like this. It has lost to the state half a million of inhabitants. It has condemned to barrenness a magnificent region, that should have been filled with wealth, with intelligence, and power. If we cast our eyes over the map of the union, we may discern in Virginia, a district of country to which the nation has three times resorted for its chief magistrate. A large proportion of the corresponding part of Pennsylvania is one unbroken wilderness, the habitual hunting ground of savages. In the cause of this calamity we may learn a great lesson, not merely of agricultural, but political wisdom. Something certainly must be ascribed to the unhappy controversy with Connecticut, which, nearly half a century of confusion, of concession, and of compromise, has but recently closed. But the greater part of the evil may be traced to bad legislation. If, when the state sold its vacant lands, they had been previously surveyed and marked, as those of the United States were, they would have been cheerfully bought and easily settled; but the unfortunate policy of selling the right to land, leaving the purchaser to find it, and the mistaken hope of peopling a country, by requiring paper conditions of settlement, instead of leaving it to fill with the natural course of enterprize—these have introduced a fatal spirit of speculation and of fraud, which thirty years have not yet completely repaired. Entire families were ruined by the madness of these delusions. In the inextricable confusion of interfering claims, the same lands were again and again sold by fraud or ignorance, till the maps of some of our counties exhibit a mosaic of conflicting surveys, which no science except law can ever bring into harmony. Then came the reaction of disappointment. Men turned with disgust from a scene of so much suffering, and dreading a lawsuit on the threshold of every man's property, abandoned in despair the attempt to settle lands so surrounded with uncertainty and trouble. There are now in Philadelphia—there are perhaps now listening to me, many owners of thousands, of 10, 20, and 50 thousands of acres of land, which they have never seen, and of which they would scarcely know the existence, but from the inevitable visit of the tax gatherer; lands which might be rendered magnificent possessions, surpassing now in extent, and hereafter in value, the most splendid estates in Europe. There are others who, deceived by exaggerated estimates—seduced by well painted drawings of streams that have never flowed, except in the eloquence of the deputy surveyor; of groves of white oaks, and beeches and maples luxuriating only upon the parchments of the land office, go on year after year, paying taxes for lands, undiscovered and undiscoverable, or which, if they really exist, may be again paid for by one, by two, by three, I have known as much as four other claimants, residing perhaps in an adjoining street. In the midst of these conflicts, there grows upon the soil, either an honest settler always willing to purchase, or else some intruder, originally perhaps not ill disposed, till the absence of all control, and a gradual attachment to his new residence, begin to inspire hopes of wresting it from the owner. He then insinuates doubts of the title, defaces the marks of surveys, and shunning the proprietor, till 21 years may ripen his possession into a title, lives on in anxious obscurity, festering, discontented and restless, imagining in every passing stranger, the approach of his most dreaded enemy. Such was once the too frequent picture of the condition of the interior of Pennsylvania; and even now, although it has nearly passed, its effects are still visible in the anxiety with which emigrants go round our state, as if there were some infection here, and pass on to remoter and poorer fields, where their industry will at least be safe.

There can be no hope for the agriculture of Pennsylvania, till this source of disquiet is completely removed; and fortunately for us, time, in revealing all the errors of that system, has furnished the means of remedying them. Every owner may now ascertain whether there are other claimants to his land, and readily adjust their mutual pretensions. Every purchaser may now satisfy himself as to the title of the seller; so that although suffering from our own improvidence, we may be allowed to console ourselves for it, by reflecting that, while the states around us have been peopled to their borders, Pennsylvania possesses an extent of well watered, healthy, rich, cheap land, covenient to both the atlantic and western markets, which however hidden from the world by her past mismanagement, now offers abundant temptations to industry, and will largely contribute to augment the population and resources of the state. To give to these advantages all their attraction, however, much more exertion is necessary than we have hitherto witnessed. There are few families in the city, who have not some connexion with the lands of the interior; there are many who have extensive estates there. To these I would recommend most emphatically, to visit and examine their possessions; to be seen, and felt, and known as the owners; to disencumber themselves at once of the burden of paying taxes for what does not exist, or might be worthless if found; to encourage every beneficial improvement, and by all the means of conciliation and liberality, which they are, I know, equally able and willing to extend, identify their own with the growing interests of the new settlements. There is still another step. How many well educated young men are there among us, languishing in the long noviciate of some profession, or wasting in indolence the finest years of their existence, who, in the new counties of the interior, might lay broad and deep the foundations, of a splendid prosperity for themselves and their families. They will be received with welcome by those whose fortunes they have come to share; and their new interests and new connexions, will soon render their situation as agreeable and distinguished as it will ultimately be profitable.

There is more satisfaction in turning from the wild to the settled parts of Pennsylvania. The old counties between the Delaware and the mountains, with the exception of Philadelphia, contain a population of about fifty to the square mile. Their mixed pursuits, their division into consumers and raisers of produce, as well as their access to the markets of Philadelphia and Baltimore, afford advantages not enjoyed perhaps by any section of the union. The soil, without being generally distinguished for fertility, is fitted for all agricultural purposes. The farms averaging probably from fifty to one hundred acres of cleared land—the taxes light—the farming implements, in general good—and the best breeds of cattle within reach. Yet, notwithstanding all these elements of the most enviable state of agriculture, we must acknowledge that our farming is still very imperfect. If any evidence of this were wanting, it might be afforded by the actual produce and the rents of our lands.

It was stated two years ago by one of the vice-presidents of this society, that the average crop of wheat in Lancaster county, which is considered the richest in the state, did not probaby exceed fifteen bushels per acre. Now the average of all France is more than eighteen bushels—the average of all England twenty-four—and in some counties, as in Middlesex and the Lothians, forty. With regard to rents, it is not easy to speak with accuracy. If we except the alluvial meadows near this city, which rent for nine or ten dollars per acre, I should not estimate the average rent of cleared land with improvements, within the district just mentioned, at more than two or three dollars. In Italy, in England, and in Scotland, lands not particularly favoured by vicinity to markets, rent for from sixteen to twenty dollars, and in the neighbourhood of large cities, from thirty to forty dollars.

The causes of this inferiority may be discovered in two characteristics of our farming—a disproportionate capital and an inefficient cultivation. The first is a striking deficiency. Agriculture, though a very common, is not, I think, a favourite pursuit in Pennsylvania. It attracts few from the other classes, and its ranks are rather thinned by desertion than recruited by volunteers. The enterprising shun it for its inactivity; the gay, from its loneliness; the prudent, from its unproductiveness; so that although a great proportion of the wealth of the state is fixed in land, an exceedingly small capital is devoted to farming. We too often exhaust our means in clearing or purchasing a farm, leaving scarcely any resources for stocking and cultivating it. Now an English farmer, with a certain capital, rents a farm, as a manufacturer rents a house, and devotes his capital to extract from it the greatest possible produce. Accordingly his proceedings seem almost incredible to the possessors of large American farms. It has become a settled maxim of English husbandry, that before occupying good arable land, a capital of from thirty to forty dollars per acre is necessary. On an estate of three hundred acres, therefore, a farmer begins by expending in preparations nine thousand dollars; and his annual disbursements, in labour, manure, and other articles, are about five thosuand dollars a year. His operations are all on a proportionate scale. To contract to pay a rent of twenty or thirty thousand dollars; to expend in a single year, on lime alone, eleven thousand dollars; to pay two thousand dollars a year for rape cake to manure turnips; to make a compost heap, costing four thousand dollars—such are the combinations of wealth and skill which produce good husbandry. These we cannot, and we need not, imitate. But they may teach us that we should measure our enterprises by our means; and that an ill managed farm can no more be profitable than an empty factory. Men praise the bounty of nature. It is much safer to rely on her justice, which as rarely fails to reward our care as to avenge our neglect. Our farms then, though small, are generally too large for our capitals; that is, we work badly too much ground, instead of cultivating well a little. In the estimates of finance, two and two do not always make four—in the arithmetic of agriculture, two are generally more than four. It is wonderful, indeed, how profusely a small spot of ground will reward good husbandry. There are in Italy hundreds and thousands of people, living on farms of from four to ten acres, and paying to the owner one-third, or one-half, of the produce. The whole straw for the Leghorn bonnets, by the exportation of which in a single year five hundred thousand dollars were gained, would grow on two acres. There are in Switzerland some hill sides, formed into terraces, which have sold for two thousand dollars an acre; and in fortunate spots for gardening, as near London, a single acre will yield a clear profit of from eight to nine hundred dollars a year. These examples may perhaps explain, how without the great capitals of England, and without diminishing our farms, we may gradually render them richer and more productive by judicious culture.

The characteristic merit of modern farming seems to be this: The old practice was to draw from land successive grain crops, and then leave it to recruit strength enough for a repetition of them. The modern system seeks to restore the soil, not by rest, but by variety—to make one crop be followed by another, feeding on different parts or at different depths of the soil from the preceding. It has, therefore, for fallows, substituted root crops. These support large quantities of cattle, which, besides the direct profit from them, afford the means of returning sooner and more successfully to the grain crops.

Now, the defects of our husbandry have relation to this system,

1st. We have not studied sufficiently our soil, with a view to establish a judicious rotation of crops, nor adapted our cultivation to our climate. As an example, I doubt whether we appreciate our long autumn, the finest of all our seasons, to which husbandry as yet trusts so little, but which would often enable us to draw a second and valuable crop of roots after grain. From the result of personal experiments made with that view, which better farmers would, of course, practise more successfully, I incline to think, that there are few of our good fields from which we could not obtain considerable crops of roots, planted and gathered after harvest. Why indeed should we not, when they are constantly obtained in Spain, in Italy, in Flanders, and even in the climate of England and Scotland?

2d. We have not yet succeeded in diffusing widely the best breeds of cattle, from the excellent stock now easy of access to us all. There is no subject on which it is more true, that a liberal expense is the strictest economy. Natural peculiarities of form in animals, are either the cause or the indication of certain qualities. Judicious observers, by the union of similar animals, have given greater development to these qualities, and established at length distinct breeds with very decisive superiorities over our ordinary cattle. These should be sought by good farmers, as their superior profits far exceed the additional price of them. But we are too often tempted by the false economy of buying cheap animals, and we are frequently misled into the practice of pampering into a sickly magnitude, cattle which have no natural facility to fatten. This is a mistaken pride, productive of no immediate good, and the more to be regretted, since the capital actually lost in feeding bad animals might have imported good ones.

3d. We are deficient in the cultivation of roots. The cattle are left to feed almost exclusively on hay in winter, instead of being supplied with roots, more nutritious and cheap in themselves, and the culture of which is among the very best preparations for the succeeding grain. The extention, on a large scale, of the root culture, would alone, I am satisfied, give a new face to the agriculture of the state. In the use of these, as well as the general treatment of cattle, we should endeavour to adopt what is justly deemed one of the greatest discoveries in agriculture—I mean the old Flemish practice, now known in England by the name of

4th. Soiling. In administering food to thoughtless persons, it would be deemed strangely improvident to let them eat and waste at pleasure. We are more respectful or less judicious towards cattle. They are allowed to enter, without restraint, fields of luxuriant vegetation; they lie down upon it; they trample it under foot; in wet weather their foot-prints commit injuries to the ground, which years cannot repair, and what is worse than all, the benefit which they might confer on the land is almost totally lost. Instead of this wasteful system, the cattle are kept under comfortable shelter, and their food is brought to them. An acre of ground thus furnishes three times as much subsistence as when pastured, and the additional expense of cutting is abundantly repaid by the rich manures which are thus saved.

There is one other branch of farming, which has scarcely made its appearance in this country—It is

5th. Irrigation. This is, probably, the most profitable of all modes of culture. Whenever the situation of land will permit of its being covered with a stream of water, the direct nourishment to the plant, the minute subdivision of the soil, and the deposit left by the water, these combine to produce an amazing fertility. In Lombardy, for instance, the irrigated meadows afford four abundant crops of grass. In the dry climate of Spain, they are still more productive. It could scarcely be believed, were it not vouched by the personal observation of Arthur Young himself, that in the watered fields of Valencia, there are actually cut, four, five, six, and seven crops of lucerne, from two and a half to three feet in height, and yielding ten tons of grass on an acre at each cutting: so that on a moderate average an acre yields no less than fifty tons of grass, and when broken up, gives three crops in the course of a year. It is not wonderful, then, that in that country the greatest efforts have been made to water their fields; that reservoirs have been constructed, canals cut, wells dug, and machines erected for raising water from the rivers, and that whole rivers themselves, instead of hastening to the ocean, have been made to pause and deposit their extraordinary fertility. To us the example is peculiarly interesting, since our climate resembles that of Spain in its dryness—the defect which irrigation is most calculated to repair. It is now almost an established law of this climate, that in midsummer there shall arrive a critical season, during which the intense heat of our long days is not relieved by rains, and our crops, just as they are verging to maturity, are suddenly checked and injured, and sometimes destroyed, by the burning influence of the sun. But instead of struggling to overcome this danger, our farmers, with a want of the characteristic spirit of the country, sit down by the side of the most magnificent rivers and unfailing streams, and lament the decay of their harvests, touching the river banks, without one effort to convey to these fields the water which is passing at their feet. In this finely watered country, we should surely be able to equal the improvements of Spain and Italy; and he will be a great benefactor, who shall exhibit a cheap and efficient mode of irrigation. If the first expense be beyond the means of an individual, it may be accomplished by the union of interested neighbours, and almost any expenditure would be justified by the success of a plan, which would at once render our fields twice, or five, or ten times more productive.

The prevailing opinion however is, that even with an improved culture, the high price of labour in this country renders farming an unproductive and hazardous investment of capital. This belief has contributed much to retard our husbandry. I myself think it entirely erroneous. My impression is, that a capital employed in judicious agriculture, would yield quite as safe and abundant a return, as in most of the other pursuits of a life among us, and probably superior to the profits of farming in other countries. For instance, the average profit on farming in England, with which we are most habituated to compare ourselves, is from ten to fifteen per cent. Now, in this country, the profits ought to be greater. The question might perhaps be decided by the single fact, that while the greater part of our farmers live well and educate large families from small farms, the same class of persons in England, the renters of farms of about fifty acres, are universally allowed to be in a miserable situation; and on that account they were actually exempted from the income tax—a forbearance which describes, at once, the measure of that wretchedness which could appease or defy even the spirit of the Exchequer. But the inquiry is sufficiently interesting to tempt us into a comparison, between the arable farms, within reach of the markets, of London and Philadelphia—

their respective expenses and profits; that is, the prices at which they may be obtained and cultivated, and then the prices of the produce of them. The first naturally resolves itself into the heads of rent and taxes, and labour and manure.

The rent of land within twenty-five miles of London, varying as it does from two to fifty dollars, it is not easy to estimate with precision; but we shall err on the side of moderation, if we place the average rent of good arable land at ten dollars. The taxes and tithes, as they are stated by Sir John Sinclair in 1821, would be fifty-three per cent. on this rent, say five dollars; making the rent and taxes on a farm of 200 acres amount to three thousand dollars. Now, if we except our alluvial meadows, the average rent of land within the same distance from Philadelphia, cannot, I think, be estimated beyond three dollars. Of tithes there are of course none; and the taxes of all kinds, judging from those of Bucks county, do not exceed twenty-five cents per acre: making the rent and taxes of a farm of two hundred acres, six hundred and fifty dollars.

In the memorial of the English Agricultural Committee of 1819, it is stated, that the tithes and taxes amount to one-third of the market price of agricultural productions. In this country they form a proportion so inconsiderable, that a single acre of good wheat will pay all the public demands on a farm of one hundred acres.

With regard to labour, I know it is against all our received opinions, but I incline to think that farm work in Pennsylvania is very little dearer, if it be not actually cheaper, than in England. The comparison is difficult, because at this distance we have not yet seen all the effects which the embarrassments of the last two years have produced on the rate of wages—because their nominal wages are generally swelled by perquisites, and because in a country, where every sixth or seventh person is legally a pauper, the poor rates are in fact only a disguised increase of wages. But, rejecting these considerations, and taking the average wages of day labour to be what it was in 1810, fifty-five cents (2*s*. 6*d*.)—and it is not probably now less near London—even this does not, I believe, fall more than about twenty-five or thirty-five per cent. below the price of day labour in the same district near Philadelphia. But the nominal price of labour is a less fair mode of comparison, than the actual expense of executing any given work in the two countries. Now, we have more long, clear, good working days, and our workmen—as I have spoken freely of our faults, I may be allowed to state our capacities—our workmen are better fed, more active, more intelligent, and more dextrous in their labours. Not to speak of the axe, in all the uses of which they have no rivals, I believe that three Pennsylvania farmers, with their scythes fresh ground and their tough ash cradles, might stand before any wheat field in Europe, and challenge twice or thrice their number of reapers. This is no exaggeration. Sir John Sinclair, in his work published as late as 1821, says, that three good reapers will cut an acre of wheat in one day. Now an American cradler will, in a field with the average crop of England, cut three, four, and even more acres in one day. He further calculates, that the cutting and binding of this acre will cost fifteen shillings, from which, if we deduct 2*s*. 6*d*. as the wages of the binder, who performs his part in half a day, there remains 12*s*. 6*d*. or $2.75 per acre. Now, allowing a moderate average of work for a cradler,—three acres,—and a high average of wages,—one dollar,—the American acre will be cut at the price of thirty-three cents, and the English acre at two hundred and seventy-five cents; and done as well too, for the difference as to the shattering out of grain between good cradling and reaping, is in fact very little, and even that may be saved by cutting rather before the complete maturity of the grain—a system to which the best English practice is now approaching. So too, an English labourer, with a driver and four or five or six horses, will not plough more in a day, than a Pennsylvanian alone with two; and no excess of wages to him, can balance the expense of a driver and two or three superfluous horses.

Again, reaping oats in Middlesex is stated to cost 8*s*. ($1.75) per acre. The same field in this country would probably be cradled for one-sixth of the expense. These details might be pursued into other departments of farming labour, and they would show, that an acre of ground may be prepared for seed, and the produce carried to market, at an expense, if not less, certainly not much greater, in America than England.*

The means of enriching land, by lime and other manures, are cheaper near Philadelphia than near London; and that most important article of husbandry, salt, is much cheaper here than in England, where taxation has almost banished it from their farm yards.

The prices of produce may be more readily compared. Of the great production of England, wheat, her farmers have the monopoly until the price rises to about $1.85. This, however, being a scarcity price, is, of course, much above the ordinary price. In July last, the average of all England was about one dollar and fifty-three cents. At the same period with us—a season of great depression—the price varied from seventy-five to ninety cents, and at the present moment, without any foreign demand, it may be stated at about one dollar and ten cents. The flesh markets are also considerably higher in England. But wheat forms only one-fourth of the crops; and in the articles of turnips and potatoes—in the root crops generally, the price is probably higher here than in England. The great staple of wool is certainly dearer in this country. These elements will enable us to contrast with our own, the condition of an English farmer, whose rent is three times as great, whose taxes are twenty times as great—manures more expensive—labour not much cheaper—and prices, on a whole rotation of crops, not much higher.

Yet they make their farms more productive; they pay higher rents. Near London or Edinburgh they can afford to pay for wheat lands twenty or thirty dollars rent per acre; and—what ought to shame us into better husbandry—in spite of all their burthens—in spite of a freight of 3000 miles, a commission to two merchants, and a duty of fifteen per cent., they reach our own market with their produce, and are always preferred to us. But then they raise twice or thrice as much wheat, and probably five times as much of other produce. They have forty bushels of wheat, and fifty of barley, and sixty or seventy of oats, and twelve hundred bushels of turnips, and four hundred bushels of potatoes; all following each other with the least practicable intervals. They succeed better than we do, because, in fact, they are better farmers than we are. But the reason of the difference is, simply, that we will not bestow on our lands the same well directed labour, or the fiftieth part of the capital which they intrust to theirs. Whenever these have been applied, as in other countries, our soil has never refused returns as abundant. Of this the premium crops of our agricultural societies afford decisive evidence: and we have recently seen an experiment, which I mention as illustrating at once the judicious employment of capital, the productiveness of small spots of ground, and the benefits of soiling. The Pennsylvania Hospital has in its neighbourhood about ten acres of ground, from which, during the last year, were soiled sixteen cows. Some of these, as their milk failed, were replaced by others. But an account of this expense, and of all the other charges, was accurately kept, and credited with the market price of the produce, consumed in the hospital. The clear profits amounted to more than two thousand dollars.

These calculations are, of course, not applicable to the remote farmers, whose markets are habitually less valuable, and who are now suffering under the extinction of the accustomed demands from abroad. Their embarrassments should, however direct their industry to new channels; and there are, fortunately, now presented to the farmers of Pennsylvania, two distinct branches of industry, which may enable them to retrieve their losses, and give a new impulse to the husbandry of the state. I mean to speak of the growth of wool, and the cultivation of flax and hemp.

The consumption of woollens in the United States cannot be less than twenty or thirty millions of dollars, of which the greater part is manufactured in the country. It is needless to be exact as to the amount, since my purpose will be explained by the facts, that the domestic supply of wool is not equal to the domestic demand—that the manufactories of Pennsylvania receive much of their wool from abroad—and that wool is at this moment probably dearer in Pennsylvania than in England, or perhaps in any of the wool growing countries; and this, while we possess the finest breeds of sheep, capable of an almost indefinite increase. These unhappy animals have been the victims of the most extraordinary caprice. When the war of the Peninsula threw into this country some of the very best breeds of Spain, they were eagerly purchased at extravagant prices. But, in too many instances, the owners were deceived by calculations of their very small consumption of food; and they omitted to adopt for them, what in the long winters of this climate is indispensable, the turnip culture. Large flocks were, therefore, crowded into narrow fields; where, as there were soon no other means of subsistence, their hunger forced them to eat the roots, and they were then denounced as utterly destructive to grass lands.—Their inadequate supply of winter food too was soon exhausted, and they were then reproached for their voracity. Even this might be borne, while the war price of wool repaid the expenses of buying subsistence for them, but when peace diminished their value, without lessening their appetite, the owners, disgusted with a stock which they did not know how to manage, sacrificed them as rashly as they had bought them, gave them away, and almost drove them away from their farms. Thus entire flocks of the finest merino sheep were devoted to the knife, for no other reason but that, contrary to the wish and expectation of the owner, they would persist in eating. The extent of these sacrifices is scarcely credible. A very respectable butcher assured me, that he bought, for one dollar a head, a flock of merinos, among which was an imported ram, who the owner declared, and I have no doubt truly, had cost one thousand dollars. That extravagance has now passed, and excellent merino sheep may be procured, well calculated to cover the interior of Pennsylvania with a most productive source of wealth. On the rich natural herbage of the woods they would subsist, without any expense, during a greater part of the year, and a small field of turnips would carry them through the winter. The only serious obstacle in the less populous districts is the wolf, and he is fast disappearing.

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* *These estimates may be supported by examples from other branches of industry. There can be no fairer measure of prices, for instance, than the expense of removing, by manual labour, a given quantity of earth; that is, of excavating a canal, though all the benefits of experience in that business are certainly on the side of England. Yet, yard for yard, a canal may probably be made as cheap in this country as in England. The latest British work of that kind is the Caledonian Canal, completed in* 1820. *There the average price in common earth was six pence, or* 11 1-9 *cents per cubical yard. Now the contracts recently made by the Company for constructing a canal by the side of the Schuylkill, are in some cases as low as seven cents per cubical yard: in other and peculiar cases as high as twenty-eight cents; but the average of the whole twenty-two miles, will not probably exceed* 11 9-10 *cents per cubical yard.*

The culture of flax and hemp in Pennsylvania has been hitherto limited by the imperfection of our machinery for working it, and by the inferiority of our dew-retting to the European practice of water-retting. Accordingly our trade in flax consists chiefly in exporting the seed to the Irish farmers, who, after raising and preparing it, return it to our factories. It is selling the fountain and buying back the stream.

The society has been for some time engaged in endeavours to remedy this deficiency, and the result of the exhibitions this day inspire a confident hope of their success. We have just examined a machine scarcely less important than the cotton gin, by which all the expensive and troublesome labours of dew and water-retting are superseded; which will prevent the deterioration both in the colour and strength of the fibre caused by those processes; which will save the whole quantity—about one half—now lost in the ordinary method; and by enabling us to gather the flax before ripening, save the land from the most exhausting process of all plants, the seeding. By the general adoption of this machine, the farmers may increase their cultivation of flax and hemp—prepare it themselves—and provide a cheap supply for the whole consumption of the country. Nor is this all. As the flax manufactures cheapen, their consumption will of course increase, till they may be made to regain that ascendancy in general use which they lost by the cheapness of cotton, and enable the farmers of the middle states to engage in a generous competition with the cotton growers of the south. This expectation may not be visionary. The great consumption of cotton is due to the machinery. Now this machine will greatly diminish the cost; and the manufactories of this country can work flax as easily as cotton. If, then, the same facilities be given to flax or hemp, their prosperity may be equal; since they enter with great advantage into our rotation of crops, and the actual produce on an acre is understood to be twice as great as that of cotton.

If, gentlemen, I have wearied you with these details, you will ascribe it to the deep conviction that nothing is more important to this community than to extend the taste for agriculture, from which the present depressed value of its produce and the habits of the last twenty years combined to estrange us. We, in Pennsylvania, have reached precisely that point where, with all the finest materials for good husbandry, one step only is necessary to ensure distinguished success. Why then can we not make this final effort? While all around us are roused into an honourable zeal for agriculture—while Virginia possesses so many societies devoted to her cultivation—while the most distinguished gentlemen from distant parts of Maryland crowded a few months since to their fine exhibition at Baltimore—while almost every county in New York has its agricultural society and its cattle show, why is it that this Pennsylvania, this land emphatically of farmers, suffers herself to be outstripped in this generous career? Why is it that, although the legislature has assigned a fund for an agricultural society in every county, that with the honourable exception of Bucks, Chester, Bradford and of Cumberland, Susquehanna, Franklin and Allegheny, whom I enumerate in justice to their spirit, the farmers of Pennsylvania have never yet found leisure to associate for the advancement of their own best interests? The establishment of these societies throughout the state, would be among the surest means of promoting its improvement. They inspire mutual confidence—they kindle mutual competition—they draw into notice the skill of experienced cultivators—they diffuse useful information—and, more than any other measure, they tend to improve and exalt the character of the farmer. The exhibitions, too, are admirable auxiliaries. By placing in their most attractive lights the labours of industry, they reward the deserving, while they stimulate the indolent, and enlist in the great cause of public improvement all the pleasures of social enjoyment and the enthusiasm of emulation. What indeed can be more exhilarating than the assemblage of a healthy, well clad, free, happy people, surrounded by the fruits of their well directed industry—the animals which display their kindness—the implements which attest their ingenuity. Who is there even on this side of the Atlantic, who does not read with more pleasure the accounts of the agricultural meetings at Holkham, than of the coronation at Westminster, or the assemblage of sovereigns at Troppau? Who did not feel more satisfaction at the exhibitions of Massachusetts or Maryland, than in the gaudiest displays of military power?

If I have failed to prove that the pursuits of agriculture may be as lucrative as other employments, it will be an easier task to vindicate their pleasures and their importance. I need not dwell on that retirement, one of the purest enjoyments of this life, and the best preparation for the future—on those healthful occupations—on that calmness of mind—on that high spirit of manliness and independence, which naturally belong to that condition. These are attractions which must have deep roots in the human heart, since they have in all times fascinated at once the imagination and won the judgment of men. But I may be allowed to say, that in this nation agriculture is probably destined to attain its highest honours, and that the country life of America ought to possess peculiar attractions. The pure and splendid institutions of this people have embodied the brightest dreams of those high spirits, who in other times and in other lands have lamented or struggled against oppression—they have realised the fine conceptions which speculative men have imagined—which wise men have planned, or brave men vainly perished in attempting to establish. Their influence in reclaiming the lost dignity of human nature and inspiring the loftiest feelings of personal independence, may be traced in every class of our citizens; but as all objects are most distinct by insulation, their effects are peculiarly obvious in the country.

The American farmer is the exclusive, absolute, uncontrolled proprietor of the soil. His tenure is not from the government; the government derives its power from him. There is above him nothing but God and the laws; no hereditary authority usurping the distinctions of personal genius; no established church spreading its dark shadow between him and heaven. His frugal government neither desires nor dares to oppress the soil; and the altars of Religion are supported only by the voluntary offerings of sincere piety. His pursuits, which no perversion can render injurious to any, are directed to the common benefit of all. In multiplying the bounties of Providence, in the improvement and embellishment of the soil—in the care of the inferior animals committed to his charge, he will find an ever varying and interesting employment, dignified by the union of liberal studies, and enlivened by the generous exercise of a simple hospitality. His character assumes a loftier interest by its influence over the public liberty. It may not be foretold to what dangers this country is destined, when its swelling population, its expanding territory, its daily complicating interests, shall awake the latent passions of men, and reveal the vulnerable points of our institutions.—But whenever these perils come, its most steadfast security, its unfailing reliance will be on that column of landed proprietors—the men of the soil and of the country—standing aloof from the passions which agitate denser communities—well educated, brave, and independent—the friends of the government, without soliciting its favours—the advocates of the people, without descending to flatter their passions; these men, rooted like their own forests, may yet interpose between the factions of the country, to heal, to defend, and to save.

There are many such men in this nation; and there was one, whom the old among us loved, and the youngest venerate—whom we may proudly place by the side of the master spirits of the best ages—the man whom his country's danger always sought at his farm, and his country's blessings always followed there—the model of American farmers. His memory is in all our hearts, and his example may well inspire a fondness for those pursuits which WASHINGTON most loved, and teach us that there is no condition in which our lives may be more useful—in which we may more honour ourselves and serve the country.

* * *

FOR THE AMERICAN FARMER.

SEDG'D WHEAT.

MR. SKINNER,—

The first appearance of sedge, or stunt in wheat, is very alarming, and if the proper remedy is not applied, it will increase considerably every crop. But it is quite harmless in my neighbourhood where we know how to manage it.

I have sown four kinds of smooth wheat, which succeeds on land which would not produce the smallest quantity of red or yellow bearded wheat. I have noticed this disease for upwards of twenty years, and have made many experiments to obviate its effects. Having discovered a remedy, I have not been injured by it for many years, although a portion of my land is subject to it.

The remedy is *change of seed*. The Brunswick, the Blue straw, and the Lawler wheat has never been injured by the stunt, in my fields.

I have sown the wye white wheat, two or three times, which also escaped. The last time I sowed it, it produced an unusual crop of straw, but the season was unfavourable, and it was injured by the rust: about that time the blue straw wheat was introduced, and I preferred it to the other two kinds, for the last three crops I have sown the Lawler.

I believe the depredator, is a worm, which preys upon the roots. I have taken up, and washed, a number of the plants, and have discovered among the roots, very small white worms, almost imperceptible to the naked eye. If it is a winged insect which does the injury it would migrate; but let others more capable, investigate the cause; I can with confidence offer a remedy, which has alway succeeded as far as my knowledge extends.

I could say much more on this subject, but the fact I state, I hope is sufficient to induce a trial of change of seed.

I will ask those who are now injured by the stunt, to examine if they can find it in their fields of smooth wheat, or whether they have ever discovered it there? Its character is not as distinctly marked now, as it was in March.—The plant in March generally appears to be dying, but it partially revives in April and May; and I have known it sometimes to put out a few very short heads, say near an inch long, but not worth cutting. If the stunt affected every kind of wheat, it would be a greater calamity than the Hessian fly: it increases rapidly. In one of my fields when it first appeared it did not extend over more than sixty feet diameter; in a few years it spread over several acres.

A.

TO THE EDITOR OF THE AMERICAN FARMER.

"SEDGED WHEAT,"

This disease ascribed to the ravages of the CLOVER INSECT: so, also the failure of CLOVER.

Dear Sir,

The prompt and obliging manner in which many of your subscribers have come forward to answer inquiries propounded in your valuable paper, often highly useful to the public, has imposed a reciprocal obligation on the rest to do likewise, whenever they may have it in their power. A due sense of this voluntary pact, which I hope may continue long to subsist, induces me to answer, as far as my experience goes, the inquiries made in one of your late papers by Mr. Graham of Easton, concerning "Sedged Wheat," a short description of which, he at the same time gave.

A reference to communications made by Z. Hollingsworth, and C. Kirk, in the first volume of the transactions of the Philadelphia Agricultural Society, will shew that this disease was first discovered in the vicinity of Elkton in this state, during the year 1808. Subsequently to the date of their communications, I have somewhere, and I think in the same work, seen this disease ascribed very circumstantially to the ravages of a very diminutive worm on the roots, so small as generally to require the aid of a glass to see it.

That these accounts are substantially correct, my own observations repeatedly made, warrant me in believing. On examination I have found two different animalculæ, whether distinct species or the same insect in its different stages of existence, I am not prepared to say, although I incline to adopt the latter opinion.

From about the 25th of April to the 20th of May a very small white worm, resembling the vinegar eel, but somewhat thicker, may be found *about* the root; and at the same time, an inanimate insect *attached* to the root, resembling the cabbage louse, only smaller. The latter I have supposed was not really of the *Aphis* tribe, but merely the chrysalis of the destructive little larva. The roots are always diseased, often dead, and frequently covered with a loose sheath or casement, not found on healthy roots. About the latter period mentioned above, the earth in the places most affected, becomes perforated with myriads of holes, apparently for the escape of the insects.

These spots, generally first appear on high light soils, containing most vegetable matter; and from a very small beginning, spread out more and more every year, until they sometimes cover a considerable extent. This disease is the more serious as when it once infests a field, we know not how long it may continue. In this characteristic of locality the insect may be said to resemble in its habitude the ant. Exhaustion of soil and want of draining frequently occasions a stinted dwarfish growth of wheat which is sometimes mistakenly called "Sedged Wheat," but which does not even resemble it, after the month of June comes in.

The farmers here all agree that the red chaff'd, bearded wheat is most liable to this diease; and a substitution of the blue straw or of the white smooth wheat, is considered generally a complete remedy against it. Some maintain that the latter kinds of wheat will not be affected at all, but this I am confident is a mistake. The reason why it affects the red more seriously than the other two kinds, may be accounted for perhaps satisfactorily, by the fact that the two kinds of smooth wheat, branch and root much more, and continue to branch at least a fortnight after the red wheat ceases, and as long as this continues, the wheat continues to throw out new roots also. The red, therefore, may cease to make efforts to recover, before the insect escapes as a fly, and the white may continue to grow and recover afterwards.

Oyster shells from the old Indian banks laid on at the rate of 80 cart loads to the acre, drive them off and destroy them *at once*, and I believe forever; and 200 bushels of shell lime to the acre will drive them off gradually, and I believe, at last effectually. This property I have discovered lime to possess against insects generally, and perhaps it may be *added to the other modus operandi* so ably disclosed by Mr. Ruffin of Virginia, whose opinions must be supported by every farmer conversant with the use of lime as a manure.

The disease, (if so it may be called) has been known in this county, and sometimes severely felt, since a few years subsequent to its appearance at Elkton; but not indeed until a few years after our best farmers had pretty largely introduced the field culture of clover—believing it to have been introduced by the clover, I have uniformly found that we have had most "Sedged wheat" in years next following those in which the vegetable growth on the fields had been most considerable: and I have no doubt that our whole fields are every year, more or less, injured by *this insect*, and that the spots which sedge are those selected by the insect to congregate on; again, in this respect resembling the ant.

I believe this insect is the same as that known by the name of the root louse in corn, so frequently found in that plant, growing *after* clover, when the land is *early flushed*, and which occasions so stinted and diseased a growth, that it rarely recovers till late in the summer, and not then, if the season is dry.

I believe also that "*clover sickness*," as it is termed, is nothing more than a surcharge in the soil of these insects, which clover multiplies if it does not introduce; and if so, here lies the *cause of the failure* on *a repetition* of the clover crop, now so universally complained of, both in this country and England—instead of "exhaustion" of the particular ingredient in the soil essential for its *particular* food, a cause of failure on a *repetition*, now so fashionably urged by *chemical* agriculturists, and so readily and cordially swallowed by others.

That the repeated cultivation of the same plant on the same spot, tends to locate its particular insect enemy thereabouts, is a fact, which I think the experience of every farmer and gardener will bear me out in asserting.

Without having penetrated far into the profound knowledge of Spallanzani and Leeuwenhock, possibly I may have imbibed too much of the enthusiasm of the late Dr. Crawford of Baltimore, with regard to the pernicious existence of animalculæ and insects in the vegetable, at least, if not in the animal kingdom. But upon this subject,—to which I refer many of our failures on *repeating* crops, unique and visionary as it may appear—I have prepared a paper, which some time hence perhaps I may submit to your discretion. After a charge, however, so serious against the clover crop, you are not to infer that I mean to relax in my efforts to raise it as extensively as I can.

I am now engaged in a course of experiments to ascertain, whether the culture of tobacco, or the application of its offal as manure, will destroy or drive off the insects which I shall for the want of its proper entomological name, call the *clover insect*. Thus far I doubt its efficacy.

If you think the foregoing, or any part of it, likely to illustrate in any degree the subject of Mr. Graham's inquiry, it is at your disposal.

Your's, &c.

THO. EMORY.

Poplar Grove,
May 16th, 1822.

TO THE EDITOR OF THE AMERICAN FARMER.

DEEP TILTH—*Importance of—how best accomplished.*

Bremo, April 25th, 1822.

Sir,

For some time past, I have been impressed with the idea lately expressed in the American Farmer, by Mr. Briggs, as to deep tilth—and which seems to have been cotemporaneously acted upon, by Mr. Delaplane, in the construction of his substratum plough.

It cannot but be flattering to find in myself a coincidence of opinion, with two gentlemen so distinguished in their respective departments of science and rural economy.

You will therefore excuse my troubling you with my own practice, and some hints, which have been suggested in the course of it, to keep alive a subject, that appears to me interesting to agriculturists.

My own practice has been to run a single horse coulter in the bottom of each furrow, immediately following the plough. I find the average depth which a strong horse will carry the coulter to be seven inches—and although one cut of the coulter in every space of 11 or 12 inches (this being about the usual width of the furrow slice of a two horse plough) may not leave the subsoil stirred sufficiently; yet it appeared to me, that the greater economy of the operation with a single horse, would more than compensate for the want of an additional cut of the coulter within the narrow space of each furrow—which could not be effected without the power of an additional horse—thereby increasing the most expensive part of the apparatus engaged in the process, to wit: the horses, in the proportion of 100 instead of 50 per cent. This may seem an unnecessary calculation to farmers who cultivate small fields, and have a large proportion of teams—but where it is necessary to make up, by the extent cultivated, what is wanting in the fertility of the soil, it becomes a serious matter to adopt any course making double teams necessary.—I am inclined to think two coulters, six inches apart, drawn by a pair of horses, might pay under some particular circumstances; but, as a general practice, in the present state of our southern agriculture, I doubt whether it would be found to quit cost. I am quite satisfied, in such a substratum of cohesive clay as I have to deal with, Mr. Delaplane's three coulters could not be drawn by a pair of horses at the desirable depth.

In order to effect an operation seven inches deep, in the bottom of a furrow where the earth is necessarily so bound and confined on all sides, to those who are inclined to try the two coulters, I would recommend that they should not be ploughed abreast of each other; but one at least six inches in advance of the other, and the foremost coulter should be on the side next to the work, for the manifest reason, that it would be less resisted at six inches from the previous work, than at twelve. This will be easily understood by practical farmers, though I may not make myself intelligible to all your readers.

I am not yet able to give you any result of my attempt at substratum tillage, having commenced it with my ploughing last autumn.

I am, Sir,
Your's respectfully,
JOHN H. COCKE.

* * *

Extract of a letter to the Editor, dated Richmond Ct. house, Va., May 13, 1822.

"I have recently rode through Fauquier, Prince William, Stafford, and King George counties, Va. the wheat never perhaps promised less to the husbandman than now. The only good crops I saw were at Kinlock, the residence of Thomas Turner, Esq., and Travellers' Rest, the beautiful farm of John Gray, Esq."

THE FARMER.

BALTIMORE, FRIDAY, MAY 24, 1822.

BERGAMI AND COLUMELLA.

We lately sold these fine animals to Commodore David Porter, to be taken to the district of Columbia; where we hope they may be as profitably employed as from their merits they deserve to be, and as one might expect they would, judging from the agricultural enterprize of the district and neighbourhood.

BERGAMI, is of the Teeswater Breed, celebrated for their disposition to great size and fatness at an early age, and likewise for the richness and quantity of their milk: two points, on which rests the value of cattle.—He is a beautiful specimen of the breed, and his great size at the age of two years, when he weighed 1400 lbs. is a conclusive proof as to early maturity.

Those who would combine the best milk and beef properties in their herds of cattle, and who can conveniently make use of Bergami ought not to allow the opportunity offered to them by the Commodore to pass unimproved.

COLUMELLA, is a full bred Holderness Bull from an imported dam, and sired by the imported bull Holderness; both dam and sire took premiums at Brighton, against the best native and foreign competitors. Animals of this breed also attain great size, and are most esteemed near **London**, because of the excessive quantity of milk which the cows yield; this quality must render the descendants of Columella, very valuable every where, but especially near to the metropolis.

* * *

☞ Since our last publication we have been favoured with the receipt from CHARLES H. HALL, Esq. of New York, of a small quantity of *Tea Seed*, brought to this country in the ship Savannah, lately from China. Whether it may succeed in the Southern climate of our country we know not, but the enterprize of some of its inhabitants may at least be gratified in making the trial.

☞ Mr. SEEBOHM, lately from Pernambuco, has politely furnished us with a few pods of *Brazilian Beans*—the pods are of a dark brown colour; they measure 9 inches in length—the seeds are of a very beautiful scarlet colour, and are reported to be a delicious vegetable.

☞ We have also received from our valued correspondent and friend, JAMES M. GARNETT, Esq. of Loretto, Essex county, Virginia, a box containing several varieties of *North Carolina Peas*; we shall embrace an opportunity at our Cattle Show next week, to distribute a portion of them among the members of the Maryland Agricultural Society.

☞ From JOHN M'QUEEN, Esq. of Georgia, we also acknowledge with pleasure, the receipt of a large quantity of Bene, or Sessamum seed—the cultivation of which is well worthy the attention of the farmers of the Southern States. By a few persons experiments have already been made with great success. The Bene or Sessamum, produces very good salad oil, not distinguishable from the finest olive oil of France and Italy, and has advantages over these, from the fact of its being less liable to grow rancid. Some accounts of this plant may be obtained from the volumes of the American Farmer. Persons desirous of making experiments with it, can be supplied gratuitously on application to the Editor, to whom it has been sent for that purpose.

* * *

PRICE CURRENT—CORRECTED WEEKLY.

Howard-street flour from the wagons, $6 62½—to $6 75—Wharf do. sales have been made at $6 50, cash—Wheat white, 143 to 144 cts.—Red, do. 140 to 142 cts.—Corn, yellow, 70 cts.—White, do. 74—Rye, 65 to 67 cts.—Oats, 40 to 45—Whiskey from the wagons 32 cts.—Shad No. 1, trimmed, $7—Do. do. No. 2, $6—No. 1, untrimmed, $5 75 to 6—No. 2, do. do. $5—Herrings, No. 1, $2 25—No. 2, do. $2 per barrel—Rice, $3 25 to 3 50 per cwt.—Apple Brandy, 36 cts.—Peach, do. none—Tar, N. Carolina, $2 25—Rosin, $2 25—White pine boards, per M $10 to 30—Pitch pine boards, $10 to 30—Beeswax, 37½ to 40 cts.—Beef, Baltimore mess, No 1, $8 to 8 50—No. 2 do. $6 to 6 50—Pork, mess do. $13 to 13 50—prime do, $11 to 11 50—Bacon, hams, 10 to 12½ cts.—Middlings, 7 to 8 cts.—Lard, 8 to 9 cts.—Candles, New England, 16 to 19 cts.—Salt, Liverpool coarse, 50 to 55 cents—Turks Island 65 to 70—St. Ubes, 53 to 55—Sugar, Havana, brown $9 to 9 50—White do. $13 to 13 50—Coffee, (W. I.) green, 28 cts.—St. Domingo, 26 cts.—Molasses, (W. I.) 30 to 32 cts.—Soal Leather 28 to 32 cts.—Rough, $4 50 to 5 per side—Butter 25 to 37½ cts.—Eggs, 10 to 12½ cts—Live Cattle, $5 to 6—Beef, prime pieces, 8 to 10 cts.

MARYLAND TOBACCO. No material change in the price of this article since our last. First quaility Tobacco, continues to maintain a high price—one hogshead raised by Mr. Singleton Burgee of Frederick county, sold this week for $32! Common Tobacco very dull.

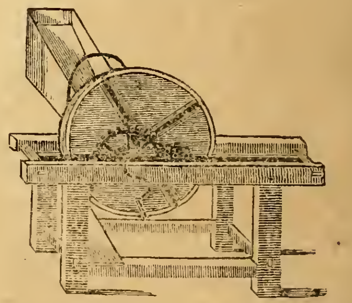
FOR SALE,

Three hundred and thirty-two acres of LAND, in Baltimore county, about eight miles from the city of Baltimore, near the Turnpike road leading to Havre-de-Grace, and between that road and the turnpike road from Baltimore to the bridge over the Susquehanna, near Rock-Run. *The White Marsh Run* a stream of water which never fails, passes through this land in its whole length, and affords sites for grist-mills, saw-mills, or other works requiring water-power; and the springs on it are admirably adapted to be useful for distilleries, tanneries, etc. and a portion of it is also adapted, by its form and aspect, for a vineyard. Plaster of Paris is used to advantage on the lands in its neighbourhood. This land is rich in its soil, and nearly all covered with heavy timber: only about forty acres being cleared—nearly one half this tract is rich *meadow land*.—It is adjoining the lands of General Ridgely, of Hampton, and the dwelling mansion of John Ridgely, Esq. is close to the southern line of this land; a part lies high and commands extensive views. A liberal credit, if required, for a large portion of the purchase money may be had. Apply in Church street, Baltimore, to

ROBERT WALSH.

Agricultural Warehouse,
AT THE SIGN OF THE WHEAT FAN,
Entrance from Light and Ellicott-sts. near Pratt street Wharf.

TURNIP SLICER.



Turnip Slicers, or Root Cutters, 16 to $20.

WHEAT FANS from 23 to $25.

Patent STRAW CUTTERS, late improvements, 5 to $18.

Half Patent, Dutch and common do

The subscriber has for sale, on the most reasonable terms,

Screens, Riddles, and Wire Sieves, assorted.

Safes, Wove Wire for windows and other purposes—ALSO,

Smiths' Bellows, different sizes.

Window Springs put in, and wire wove to order on the shortest notice.

The best workmen are employed, he therefore expects his work will recommend itself.

J. GRAFFLIN.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, at the North West corner of Market and Belvidere-streets, Baltimore, *where every description of Book and Job printing is executed with neatness and despatch*—Orders from a distance for Binding, with proper directions, promptly attended to.

AGRICULTURE.

FOR THE AMERICAN FARMER.

PROCEEDINGS OF THE AGRICULTURAL SOCIETY OF ALBEMARLE.

Monday, May 6th, 1822.

The following new Members were elected. Doct. Thomas Wharton, and William Ashby, Esq. of Culpepper.

Reuben Lewis, Jesse Lewis, Overton Anderson, Geo. M. Woods, Daniel M. Railey, and the Rev. F. W. Hatch, of Albemarle.

A communication from P. Minor was read, detailing an experiment of a new mode of raising corn. For this experiment the Society voted Mr. M. a premium of $30 in a piece of silver plate.

A communication from Th. J. Randolph, Esq. was read upon fallows, and manure, exhibiting some new and interesting ideas respecting both.

Ordered, That both these essays be published in the Central Gazette, and American Farmer.

To the Agricultural Society of Albemarle.

April 1st, 1822.

The following account of an experiment in the culture of Indian Corn, with the certified result of its production is submitted to the Society, with a claim for the premium offered by their resolution of the 1st Nov. 1819: For the greatest production and best quality of Indian Corn, made upon not less than two acres of high land.

This experiment was made upon an uneven piece of ground, (of gravelly loam) laying between two hills, and comprehending a side of each. A part of it was several years ago occupied by a stable, and the necessary lot around it where horses and milch cows were confined during the winter. In the autumn of 1819 the stable was removed, and the lot and the adjacent land, to the amount of 3 acres and more, was broken up, and in the year 1820 cultivated in tobacco without any manure being applied, except one bushel of plaster paris, sown broad cast just before the hills were made. The crop of tobacco was very great. The ground, after the tobacco was cut, remained untouched during the winter. On the 2d and 3d days of March, 1821, it was broken up with two ploughs, that is, one which cut very wide, was first run, and another more narrow followed in the same furrow, breaking the land about 10 inches deep.

15th of April, laid off the ground in rows seven feet apart with a large plough; the plough running twice to widen and deepen the furrow. These furrows were then filled even full with coarse half rotten straw and chaff from the barn yard. It required 40 loads of about 30 bushels each to go over two acres in this way. But from the circumstance of my extending the experiment over a greater space than two acres, and the distance of the barn yard, and one cart only being employed, the manuring was not completed in less than ten days, all which time the manure remained exposed in the furrows.

26th of April—The manuring being completed, a list was formed upon each row of manure by running a large plough on each side of it, and the corn immediately sown thickly in the furrows left by forming these lists—making in fact a double row of corn with the manure between. The corn was covered with the hoe. Near two bushels were used, which was perhaps five times more than necessary, but it was done to ensure the crop and avoid the trouble and risk of replanting; I procured the corn from Mr. John Rogers of this county, and call it the red Cobb. It is remarkable for shelling out more than any other kind I have seen—and was introduced, I understand, into this county several years ago by Mr. Craven Peyton of Buck-Island. On the 29th of April an excessively hard rain fell which washed up a great deal of the Corn. This was replanted the 5th of May, and the damages of the rain, in some respects, repaired.—Many of the lists were washed over, and the manure to a considerable extent entirely removed.

18th and 19th of May. Worked the cultivators between the rows running three times, and thinned and wed the corn, leaving it to stand from 12 to 20 inches, according to the looks of the corn and strength of the land. The lists remained untouched, except to destroy any grass or weeds on them with the hoe. Upon accurate measurement afterwards through the lot in various directions, I found the distance of the stalks averaged 17 inches apart, which gives about 9000 stalks per acre. On the 26th planted the whole lot thickly in pumpkins under the impression that they would benefit the crop by preserving moisture.

June 15th. Ploughed with shovel ploughs and wed and suckered the corn;—the lists still remaining untouched, except to scrape off the grass and weeds, of which very little ever appeared.

August 11th. Cut the tops from every other row to admit sun and air. This was an experiment from which I could see no benefit or injury, except that it admitted the pumpkins to start, which from this time grew rapidly, but very few of them ripened before frost.

Between the 25th of August and 3d of Sept., the blade fodder was pulled, and the other half of the tops were cut, the quantity of both was exceedingly great, but I did not ascertain the exact amount, and on the 13th of Oct. under the inspection of James Rippeto and Albert G. Quarles, I measured the crop from two acres, which had been previously laid off by Col. Wm. Woods. The produce was ninety four bushels of shelled corn per acre, as the accompanying certificates of those gentlemen will shew.

I deem it proper to state, that this mode of cultivating corn is not original with me. I recollect an account some years ago in a newspaper, that some person to the northward, (perhaps in the state of Delaware) had by an exactly similar process made 20 barrels of corn per acre upon poor land. The name and particular residence of the person I cannot remember, but the process and cultivation was exactly what I followed. The reading this account induced me in the year 1819 to make some experiments upon the plan mentioned, with a view to test the relative advantage of this, and the common mode of planting in single drills of six feet by two. I did it with great care and attention, and now take the liberty to present the society with the result, as extracted from my diary of that year.

EXTRACT.

OCTOBER 15, 1819.

Memorandum of the result of a new mode of Planting Corn.

In the early part of May last planted the flat piece of ground above my shop in corn, in drills of six feet apart, with the stalks thinned to 18 inches distance; except ten rows through the middle, which were prepared and planted as follows:

Deep furrows were run, with a two horse plough at 7 feet apart for the ten rows, and the plough made to return in each to make them wider and deeper; four of these furrows were filled even full, after being somewhat rotten with the richest stable dung, four were filled with half rotten chaff upon which cattle had been wintered, and two were filled with dry unrotted wheat straw. A list was then formed upon each furrow by running a large plough once on each side of it; and double rows of corn planted in the furrows left by forming these lists. The corn was thinned to the same distance as the adjoinimg single rows, viz: 18 inches, and was all cultivated alike except that the lists containing the manure were left untouched, unless to pull out any weeds, that sprung up. The rows were all of the same length, and the quality of the land the same. On this day gathered one single row, and one double row of each kind of manure—the measurement, weight, &c. of each is shewn in the following tabular statement.

Rows.	No. of stalks	No. of ears.	Measurement	Weight.
1st. A single row planted in the common way.	272	217	2 bushels and 1 peck.	lbs. 96
2d. a double row manured with stable dung	542	350	3 bushels & 2 pecks	154
3d. a double row manured with half rotten chaff.	520	382	4 bushels.	168
4th. a double row manured with dry wheat straw.	480	376	4 bushels & 2 pecks.	194

Three facts may be noticed as remarkable in this experiment. 1st. The extreme shortness of the crop. 2d. That the production was somewhat in an inverse ratio to the number of stalks, and 3d. That the row manured with dry wheat straw produced the most.—To those who remember the excessive drought of the year 1819, which was unprecedented in this part of Virginia, there will be no difficulty in accounting for the shortness of the crop.—And perhaps the same cause will go far to explain the 2d circumstance, as a crowded crop is generally observed to suffer the most in dry seasons.—The increased production from the dry wheat straw, I shall not here attempt to account for, but rather suggest and recommend to the enterprizing members of our society, the propriety of making further experiments in this mode of culture, with a view, more fully to establish the fact. If a double crop can be raised by the application in this way of dry straw, (which my experiment demonstrated) would it not be both an economy of labour and a means of further improving our lands to pursue this method to a more or less extent upon all our farms? Half the quantity of land, and about half the cultivation only, would be necessary to make the same crop; and an article thereby turned to profitable account, which at present, on many farms, is in a great measure wasted. We might indeed select level spots convenient and near to our straw yards, and make them permanent corn lots, to the great relief of our hill sides, which taking into account the washing occasioned by summer tillage, is more exhausted by corn, than by all the other crops of a rotation put together.

P. MINOR.

FROM A NEW YORK PAPER.

WOOL.

The Long Island Star contains a communication on the subject of growing and cleaning wool, from which we take the following extracts:—

I will now address a few words to the experimental farmer, and to farmers in general, by way of admonishing as well as instructing them a little in the management of their sheep and wool, as the shepherd's calling is now united with the pursuits of the naturalist, and knowledge, combined with industry, is doing much to improve the sheep of this country, in order to confirm the stability and extend the circulation of their manufactures, and so happily seconded by the judgment, eloquence, fortune, influence, &c. of distinguished agriculturists throughout this extended country.

As the genial season is near at hand when flocks are disburthened of their coat, and pay their annual tribute, due for the protection and sustenance they have received, I would have them collected together in a grassy enclosure, near the owner's dwelling, where they should be disburthened of those loads of excrements they are too commonly allowed to carry behind them, and which in England is called dagging. Whenever this is attended to, it is a proof of the farmer's improving taste—of his honesty, and his humanity. I bought a farmer's wool on Long Island, about three years back; in fact, the very first lot I bought after my arrival here; the flock I believe consisted of two or three hundred, out of which I sent back to him 16 lbs. of real dung, that was left on the breech of the fleece, which cost me 65 cents per lb. Don't you think, Mr. Editor, that the farmer ought, in justice and honor, to have returned me so much money or its weight in wool? The farmer who sends filthy wool to market, ought to be reported. Here is no law, I find, as in England, against *false winding*—laws were only made for the villains of society. The farmers of this country, I believe to be moral and conscientious, in general, and disdain to be made honest by constraint. I wish every farmer to wash his sheep in a fine clear running stream of fresh water, till they are quite clear of yolk; then put them in some orchard or enclosure, where there is no dirt or filth of any kind, for them to lie down in; then let them remain till they are quite dry; then let the shepherd display his skill in shearing them, on a clean barn floor, or on a spread sail cloth on the grass, where the fleece cannot imbibe any dirt or rubbish. Let there be a table provided, on which to wind the fleece carefully up, as you would a clean tablecloth, and then it will unfold as easy and as clean under the sorter's hands, as in justice it ought to do. I very often find fleeces with long bands to them, twisted as hard as bell-ropes, from the breech of the fleece, containing and concealing all the coarser parts of the fleece. This, too, is an artful trick of the wool-winder, and occasions a great deal of trouble to the sorter. I could wish to have every fleece tied up neatly with a piece of twine, quite dry, and free from every noxious particle. When I find sand, or any thing that is not wool, or trace the evidences of its being shorn and wound up in a moist state, circumstances which every novice in sorting can distinguish; when I see wool piled upon a damp barn floor, far from the influence of the air and sun, as though jealous of their evaporating power: I say, Mr. Editor, when I see these things, I cannot help attributing them to causes, not altogether accidental. I very often detect the shepherds' carelessness, where water is scarce. Instead of keeping out of the fleece, sand, clay, dirt, sticks, straws, grass, buns, &c. with which it is encumbered, he supplies it with a still larger proportion of them by plunging the sheep into stagnant water and muddy pools, or by driving them several times through a small rivulet, rendered turbid by their passage, afterwards driving them dripping wet along dusty roads, and lodging them, in that state, on dry fallows and sandy soils, all which is visible in the colour and grittiness of the staple. Indeed, sir, I seldom examine a parcel of wool without finding some of these defects in it. But I can make due allowance: the most careful farmer cannot always prevent those contaminations; and besides, the country is young in these matters. When it has attained its due maturity, we shall find it more perfect. There is something so artless, so innocent, so simple, in all the associations of our ideas respecting sheep and wool, and we find them so often mentioned in the Scriptures, that one would think every pious farmer must look on them as things almost sacred.

I now appeal, Mr. Editor, to those farmers who have not been exactly influenced by these ideas, and feel some compunction for the injuries I have herein sustained. They may make me some reparation and appease their own consciences a little, and serve their country materially by a due attention to that important article, WOOL, an article very closely connected with the interests of every class of society; and also, by washing and managing it well, so as to compete, at least, with the foreign wools, now pouring in so fast upon us, for it is of the utmost importance to the American wool-grower, that he be not outdone by foreigners. Many of our manufacturers already give a preference to the wool of Spain particularly, purely on account of its cleanness, and yielding so little waste, when compared with American wool.

Did you ever read the story in Ovid, Mr. Editor, of one Jason, who took a long and dangerous voyage to Colchis, in search of the golden fleece, so celebrated in the songs of Orpheus? I was extensively engaged in the wool trade nearly fourteen years, in England, but could never find it; and now although I crossed the Atlantic in search of it, I despair of ever finding it here. If, instead of all those noxious ingredients I have hitherto met with in your fleeces, I could now and then find something valuable, a piece of homespun to make me a working jacket, a silver spoon or two, a half eagle or a doubloon; then I might say I had obtained the prize! Here is the golden fleece I have so long sought for!

But I might have foreseen and guarded against all this mishap, had I taken Gideon's method. He that has read the book of Judges will there see the means he used, to ascertain how far he had the divine favor with him, before he went up against the Midianites. Had I made the same experiment with a fleece of wool, before I ventured to encounter the Americans, I might also have reduced the thing to a certainty, one way or the other. However, Mr. Editor, as sheep-shearing season is so near at hand, I will cherish a hope, that I shall be fleeced in a very different way to what I have been. A silver cup or a silver spoon in every sack's mouth, will be better than five or six pounds of dirt, sticks, straw, or stones. If I should experience some gratifications of this sort, from the wool growers, this ensuing clip, I will, if I live, make suitable mention of the same next year, in behalf of my brethren of the staple, and self. Till then I take my leave of you.

New York, May 6.

GLASS MANUFACTURE.

The art of manufacturing ornamental glass may be classed amongst the most beautiful of the useful arts, and affords one of the few instances in which the moderns excel the ancients in matters of tasteful design and execution. What has greatly contributed to this evident superiority is a scientific knowledge of the chymical properties of earths and metals, a species of knowledge with which the ancients, with the exception, perhaps, of the Egyptians, were almost totally unacquainted. The art, however, even in an imperfect state, was so highly esteemed by the ancients, that very shortly after its introduction among the Romans, it was adopted as the most splendid decoration of their imperial banquets, and almost banished the use of gold and silver ornaments. One exquisite specimen of the skill of the ancients in this department is too well known and appreciated to need any criticism—we refer to the Barberini vase in the British museum. This, like most of the remaining specimens of ancient glass blowing, is round, for the ancients seem never to have acquired the art of manufacturing vessels of oval and mutilateral forms. The Chinese have brought this art to a high degree of finish, but from the same cause as affected the manufacture among the Romans, have been compelled to confine themselves to a very limited range.

Among the moderns, the Venetians led the way in the working of fine glass: from them the art was borrowed by the English, and has gone on constantly improving till our glass-works now excel, beyound all dispute, the glass works of any other country in the world.—It seems scarcely possible to carry the art any further, but a book has lately been put into our hands, written by Mr. Pellatt, of St. Paul's church-yard, which gives the hope of elevating the glass manufacture to the class of the fine arts. His book contains an account of a patent for the ornamental incrustation of glass, with several specimens of the present state of the invention. If we may judge by the plates, and also by some specimens which we have seen, the writer has completely made out a claim to rank among the most eminent of the improvers of our manufactures, and may fairly challenge a place among the professors of the fine arts, though he modestly disclaims any such pretension. Those who may not have an opportunity of seeing his book, or the specimens in his store-rooms, may form some notion of the invention from the following description, extracted from his publication:

"England has always been famed for bringing to perfection, and directing to a useful application, the crude inventions of other countries. A patent has recently been taken out for ornamental incrustations, called crystallo Ceramie, which bids fair to form an era in the art of glass making. By the improved process, ornaments of any description, arms, cyphers, portraits, and landscapes, of any variety of colour, may be introduced into glass, so as to become perfectly imperishable. The substance of which they are composed is less fusible than glass, incapable of generating air, and at the same time susceptible of contraction or expansion, as, in the course of manufacture, glass becomes hot or cold. It may previously be formed into any device or figure by either moulding or modelling; and may be painted with metallic colours, which are fixed by exposure to metallic heat. The ornaments are introduced in the body of the glass while hot, by which means the air is effectually excluded, the composition being actually incorporated with the glass. In this way, every description of ornamental glass ware may be decorated with embossed white or coloured arms or crests. Specimens of these incrustations have been exhibited, not only in decanters and wine glasses, but in lamps, girandoles, chimney ornaments, plates and smelling bottles. Busts and statues, on a small scale, caryatides to support lamps or clocks, masks, after the antique, have been introduced with admirable effect.

"The composition used in the patent incrustations is of a silvery appearance, which has a superb effect when introduced into richly cut glass. Miniatures, however, may be enamelled upon it, without the colours losing any of their brilliancy; and thus, instead of being painted on the surface of the chrystal may be embodied in it.

"A most important advantage to be derived from this elegant invention respects the preservation of inscriptions. Casts of medals and coins present no equal security for perpetuating them. The inscription, when once incrusted in a solid block of chrystal, like the fly in amber, will effectually resist for ages the destructive action of the atmosphere. Had this art have been known to the ancients, it would have perpetuated to us many interesting memorials. In laying the foundation of a public edifice, an incrustation of this kind will be a record *ære perennius.*

"It is probable, however, that a collateral advantage of no small importance will result from the invention, inasmuch as it will tend very considerably to enhance the value of the British glass wares, and to extend the application of glass to new purposes of domestic utility. The highly ornamental effect which may by this means be given to glass, will recommend these incrustations in the place of metallic ornaments for door plates, or handles, bell pulls, looking glasses, and other sorts of furniture, besides plateaus, and the decorations of the table or sideboard. The extension of any branch of domestic industry at the present time is a consideration of the greatest moment."—*Aurora.*

VACCINATION.

Report to the Secretary of State for the Home Department, from the British National Vaccine Establishment.

National Vaccine Establishment at Percy Street, January 31, 1822.

Sir: Vaccination has now been submitted to the test of another year's experience, and the result is an increase of our confidence in the benefits of it. We are happy to say, that it appears to have been practised more extensively than it was, notwithstanding the influence of exaggerated rumours of the frequent occurrence of small pox subsequently on the minds of some persons, and the obstinate prejudices of others, who still continue to adopt inoculation for that disease. The unavoidable consequence of the latter practice is to supply a constant source of infection, and to put the merits of vaccination perpetually to the severest trial.

Of small pox, in the modified and peculiar form which it assumes, when it attacks a patient, who has been previously vaccinated, many cases indeed have been reported to us, in the course of last year, and some have fallen within the sphere of our own observation; but the disorder has always run a safe course, being uniformly exempt from the secondary fever, in which the patient dies most commonly, when he dies of small pox.

For the truth of this assertion, we appeal to the testimony of the whole medical world. And for a proof that the number of such cases bears no proportion to the thousands who have profitted, to the fullest extent of security, by its protecting influence, we appeal confidently to all who frequent the theatres and crowded assemblies, to admit that they do not discover in the rising generation any longer that disfigurement of the human face, which was obvious every where some years since.

To account for occasional failures, of which we readily admit the existence, something is to be attributed to those animosities which prevail throughout nature, and which the physician observes, not in some peculiar constitutions only, but in the same constitution at different periods of life, rendering the human frame at one time susceptible of disorder from a mere change of the wind, and capable, at another, of resisting the most malignant and subtle contagion. But amongst the most frequent sources of failure which have occurred, and will for some time continue to occur, is to be numbered that careless facility with which unskilful benevolence undertook to perform vaccination in the early years of the discovery: for experience has taught us, that a strict inquiry into condition of the patient to be vaccinated, great attention to the state of the matter to be inserted, and a vigilant observation of the progress of the vesicles, on the part of the operator, are all essentially necessary to its complete success.

That less enlightened parents should hesitate to accept a substitute for inoculation, which is not perfect in all its pretensions, and absolutely and altogether effectual to exempt the objects of their solicitude from every future possible inconvenience, does not surprize us; but we cannot forbear to express our unqualified reprobation of the conduct of those Medical practitioners, who, knowing well that vaccination scarcely occasions the slightest indispositions, that it spreads no contagion, that in a very large proportion of cases it affords an entire security against small pox, and in almost every instance is a protection against danger from that disease, are yet hardy enough to persevere in recommending the insertion of a poison, of which they cannot pretend to anticipate either the measure or the issue (for no discernment is able to distinguish those constitutions which will admit inoculated small pox with safety;) and there are some families so dangerously affected by all the eruptive diseases that they fall into imminent hazard in taking any of them. This remark has a peculiar application to small pox.

A family lost its two first born children of the small pox, inoculated by two of the most skilful surgeons of the time; nor is it improbable that the parents might have had to lament the loss of more children under the same formidable disease, if the promulgation of the protecting influence of vaccination had not happily interposed to rescue them from the consequences of a repetition of the fatal experiment. Of their remaining children, one took the small pox after vaccination, and went through it in that mild and mitigated form, which stamps a value upon this resource, as real in the eye of reason and sound philosophy, as when it prevents the malady altogether.

We have contended, sir, for this its merit with all the powers of our understanding, and with all that fair and just pretension to convince others to which we are entitled, by being firmly and sincerely convinced ourselves. Nor shall we relax in our efforts to promote its adoption, but continue to exert the influence which the benevolent designs of Parliament, in establishing this Board, have given us, for extending the benefits of this salutary practice.

That the blessing is not yet absolutely perfect, we are ready to admit; but when we compare it with inoculation for the small pox, the only alternative, we have no hesitation in stating, that the comparison affords an irresistible proof of its superior claims to regard; for we learn from ample experience, that the number of cases of small pox, in the safe form which it is found to assume after vaccination, is by no means equal to the number of deaths by inoculation; an evidence quite irrefragable, and, as it appears to us decisive as to the incalculable advantages of the practice of the first over that of the latter method.

The number of persons who have died of the small pox this year within the bills of mortality is only 508; not more than two-thirds of the number who fell a sacrifice to that disease the year before; and as in our last report we had the satisfaction of stating that more persons had been vaccinated during the preceding than in any former twelve months, we flatter ourselves that this diminution of the number of deaths from small pox may fairly be attributed to the wider diffusion of vaccination.

Henry Halford, President.
Alg Frampton,
Tho. Hume,
Charles Badham,
Robert Lloyd, } Censors of the Royal College of Physicians.
Everard Home, { Master of the Royal College of Surgeons.
William Brizard
Henry Cline } Governors of the Royal College of Surgeons.
By order of the Board,
James Hervey, M. D. Registrar.

FROM A LONDON PAPER

FOREIGN CORN.

These documents shew the error of the great politico-economical oracle of the world, Adam Smith, *on the subject of foreign imported grain. He is equally wrong in twenty other great points.*

EXTRACTS FROM THE EVIDENCE TAKEN BY THE AGRICULTURAL COMMITTEE.

One of the most important of the subjects on which evidence was taken, is the rate at which foreign corn can be imported into this country.

Dr. Smith had observed, "that the small quantity of foreign corn imported even in times of the greatest scarcity, may satisfy our farmers that they can have nothing to fear from the freest importation." This conclusion, however, it was maintained had been completely falsified by experience, and the most extravagant assertions respecting the price at which corn could be raised in foreign countries were hazarded both in and out of Parliament.

John Christain Curwen, Esq. M. P. stated in evidence before the committee:—

"I should apprehend that the price of grain in Poland, from whence the greatest supply comes, is not more than 16s. when sold to the speculator at Dantzic; the price at Odessa much less, and that the speculator, in the first instance, gains probably not much less than a hundred per cent. by it, and that the cause of bringing it to this country in the quantities that have been so ruinous to it, have been the enormous profits expected by the importer."

John Ellman, Esq. stated, as on the authority of different importers of grain, and particularly a gentleman living at Lewes, a very large mealman and merchant, who showed him several letters both from Dantzic and Hamburgh, that—

"White wheats and red wheats to weigh 61 and 62 pounds a bushel after paying the freight, could be delivered at Newhaven harbour, near Lewes, at from 32 to 34 shillings a quarter; the freight would be about four shillings a quarter; that they could buy it at 28s. to 30s.

"Did he state that as the usual average price, or merely the price at the present moment?—He stated that it was frequently lower; that he could frequently purchase it at a less price, and I supposed, *vice versa*, sometimes it would be higher.

Mr. William Stickney.—"I have an account of the prices of foreign corn abroad; at Antwerp wheat may be obtained from 34s. 6d. to 37s. 6d.;

oats, 11s. 3d. to 12s. 3d.; at Archangel, wheat from 21s. to 22s.; from 9s. to 9s. 6d. for oats; at Koningsberg, from 34s. 44s. for wheat; oats from 12s. to 13s.; at Memel, wheat 31s. 5d. to 32s. 6d.; oats, from 12s. to 12s. 4d.; at Riga, wheat 22s. 6d. to 30s.; oats, 11s. 6d. to 11s. 8d.; at Liebau, from 30s. to 33s. for wheat; and oats 11s. 4d.

"Then there is the freight to be added to that?—Yes: but that would be very trifling from these near places."

G. Webb Hall, Esq.—"The first thing we venture to ask is a permanent duty, whatever may be the price of 40s. per quarter upon wheat; and we do it on this principle, that wheat may be imported upon an average of years from 30s. to 35s. into the port of London."

Mr. Tooke, who for many years has been extensively engaged in commerce with Russia, delivered in accounts of the prices of wheat at the various ports of Russia, from 1814 to 1820, and of the cost delivered in the port of London.

The following, according to Mr. Tooke, are the average prices of wheat in the various Russian ports:—

From Petersburgh, in 1814. £2, 1s. 8d.—1815, £1, 17s. 9d.—1816, £2, 5s.—1817, £2, 18s.—1818, £2, 11s. 6d.—1819, £1, 14s, 8d.—1820, £1, 10s. 4d.

From Archangel, 1814, £2, 1s.—1815, £1, 16s. 7d.—1816, £2, 1s.—1817, £2. 18s. 4d.—1818, £2, 6s. 1d.—1819, £1, 10s. 7d.—1820, £1, 4s.

From Riga, in 1814, £2, 13s. 11d.—1815, £2, 7s. 10d.—1816, £2, 15s. 7d.—1817, £2, 13s. 7d. —1818, £2, 19s.—1819, £1, 19s. 4d.—1820, £1, 15s. 5d.

The following are the average prices at which it was delivered in the port of London:—

From Petersburgh, in 1814, £3, 1s. 3d.—1815, £2. 14s. 5d.—1816, £2, 14s. 7d.—1817, £3, 8s. —1818, £3, 2s. 6d.—1819, £2, 4s. 11d.—1820, £1, 19s. 8d.

From Archangel, in 1814, £3, 5s. 3d.—1815, £2, 15s. 6d.—1816, £2, 11s. 5d.—1817, £3, 9s. 7d.—1818, £2, 19s. 2d.—1819, £2, 2s. 10d.—1820, £1, 14s. 6d.

From Riga, in 1814, £3, 13s. 7d.—1815, £3, 4s. 4d.—1816, £3, 4s. 11d.—1817, £4, 3s, 5d.—1818, £3, 9s. 9d.—1819, £2, 9s. 4d.—1820, £2, 4s. 6d

Exclusive of granary rent, and fire insurance, and exclusive of interest of money and of the merchants' commission when on consignment, and also exclusive of the liability to damage, and of getting out of condition during the voyage.

At Odessa, wheat would stand rather more than 30s. on board, and the charges to this about 16s. per quarter, exclusive of risk of damages, which are little less than 5s. a quarter, and a variety of charges. Taking all charges into consideration, wheat could not be imported at present into London from Odessa at less than upwards of 50s. a quarter.

With respect to the quality compared with English wheat, Mr. Tooke observed—

"The best guide is the difference of price in the market; and while the best British white wheat is quoted at from 61s, to 64s. the quotations are from Archangel 36s. and 37s.; Petersburgh, 36s. and 39s.; extra, 44s. and hard 46s.; Riga, 39s. to 43s.; Courland, 44s. These are the prices quoted for what is free."

FROM THE BOSTON DAILY ADVERTISER.

COMPARISON OF THE PRESENT, WITH SOME PAST SEASONS.

We have for several years published such a comparison, and the farmers and general readers having expressed a certain degree of pleasure from the statement, we continue it. It certainly may be made of some use, if cultivators, instead of consulting the almanac, will attend to the indications of nature. Certain plants will not flower till the earth has arrived to a given degree of temperature.

They vary from five to twenty days in the time of flowering, in different seasons. If, therefore, as to the tenderer plants, the Indian corn, squash, pumpkin and melon, we should resolve to plant them, not at a determinate period of the year, but when we should find by the flowering of certain plants, that the soil is so warm as not to endanger their rotting in the earth, we think some good would be attained.

We shall take a few plants as a specimen, and compare the present season with some of the earliest during the last nine years.

The *Cherry* opened its blossoms in 1813, May 10th—1815, May 10th—1816, May 6th—1818, May 17—1820, May 2d—1822, May 1st.

Asparagus was fit for the table for the first time in 1813, May 4th—1815, May 6th—1816, May 5th—1818, May 15th—1820, May 1st—1822. May 1st. It should be remarked, that the Asparagus was cut from the *same* bed in each year—a bed planted 39 years since, and never changed, and off one which has been constantly growing better—an important fact in horticulture.

Plums were first in flower in the year 1815, May 14th—1817, May 7th—1819, May 13th—1821, May 11th—1822, May 4th.

Pears began to blow for the first time in 1813, May 20th—1815, May 12th—1817, May 7th—1819, May 17th—1820, May 9th—1822, May 5th.

Apples first showed their open flowers, in 1813, May 23d—1816, May 18th—1817, May 12th—1819, May 19th—1820, May 11th—1822, May 9th.

It will be seen by this table, that the present season is the earliest, on the whole, which we have had for nine years.

There is, however, a manifest difference between the relative times of flowering of the *different* plants, in the several years; and this is readily accounted for by the circumstance, that a single cold turn of weather will check the progress of all plants, and the season which may have produced the earliest flowers on the Apricot, the earliest of our fruits, may be not earlier than usual in producing flowers on the Apple.

To give one practical rule, which we believe may be of some use, we should say, that when the Apple tree flowers, we may safely (be it sooner or later) venture to put our corn, squashes and melons into the earth.

The season was the earliest as to the opening of the ground known on my place for 10 years. I planted potatoes and peas on the 7th of March, fifteen days earlier than I was ever able to do it before—but as I have often before remarked, all these differences disappear as the season advances, and on the whole I doubt whether the present season is in advance more than four or five days than that of common years. It however, is a great relief to the labour of the farmer.—His season of labour has been extended this year at least three weeks in this vicinity, and this is of great value to him. The show of blossoms in all kinds of fruit is very good, nearly double to that of the last year. The present cold weather is highly beneficial to the fruit. We had a pretty severe frost on the 6th inst. which in low grounds injured early potatoes, but the damage on the whole was not great. If we can escape another for one week more, we may presume on a fruitful year. The prospect of grass is at this moment above that of ordinary years.

A ROXBURY FARMER.

N. B.—I am sensible these remarks will appear dull to many readers; but after all they are more innocent, and of more consequence than political squabbles, or the new invented distinctions of "middling interest, and "federal interest," when in fact, we have but ONE interest, the prosperity and happiness of our *common country.*

NEW METHOD OF PRESERVING POTATOES.

The following method of preserving this important article of food is extracted from the Memoirs of the Caledonian Horticultural Society:—

For some years, I have bestowed considerable attention on the mode of preserving that most useful and valuable vegetable, the potato. I have tried many various ways of keeping it, but have found none so good as the following, which I have employed these two last years with the best success.

That part of my potatoes, which I mean to keep longest, that is, for spring and summer use, before the succeeding crop be ready, I put into small pits, holding about two bolls each, heaped up and covered in the usual mode, with straw and earth. In April or May, according to the heat of the season, these potatoes are turned over into other pits, after carefully rubbing off, or picking out the shoots or buds, and laying aside every one that has any blemish or tendency to spoil. The evening before, a new pit is dug, or an old one cleaned out, in some dry spot; and, if possible, under the shade of some tree, wall, or stack of hay, &c. This is filled nearly full of water, which by next morning is all drunk in, and the earth well cooled all round in the pit. The potatoes carefully picked of all their shoots, are put into the pit thus prepared; and every quantity, of a firlot or half a boll, is watered as it is put in till the potatoes are level with the surface of the ground; they are then covered with live turf the green side next the potatoes, and a hearty watering given; when the whole is covered to the depth of two feet, with earth, watered and well beaten together with the spade. This process is repeated every time the potatoes are turned over, which is about once in three weeks, less or more according to the weather. When it is very hot, and the pits or heaps not in the shade, it is proper sometimes to cover the pit or heap with a mat, supported on a few sticks, so as to allow a free current of air between the mat and the heap.

In this way, I have been enabled to preserve potatoes quite plump, and entire in taste, to the end of September, or till the succeeding crop be sufficiently ripe, to be used without loss; and loss must always be sustained in the quantity, when potatoes are largely used before they be nearly ripe. Nay, in this way, potatoes may be recovered in plumpness and taste, when they have suffered by injudicious exposure to air and heat, or by necessary carriage. In July last, I had occasion to send some potatoes for the use of my family, at sea bathing quarters, a distance of sixteen or seventeen miles. They were taken out of the pit, and put into a sack; but it was three or four days before they were sent off; and, when they came to be used, they were found to have lost much of their fine taste, and somewhat of their mealiness. I immediately made a small pit in the back ground belonging to the house I possessed; into which, when well watered, the potatoes were put, watered and covered, as already described. In five days the pit was opened, and the potatoes had recovered both their dryness and taste.

AGRICULTURAL PREMIUMS.

The Farmers Society of Barnwell District will award the following Premiums, each to consist of Twenty Dollars, or a Silver Mug of that value, at the option of successful candidates, at their stated meeting in January 1823.

1st, For the greatest quantity of *Grain*, the produce of one acre of *High Land*.

2d, For the greatest quantity of *Grain*, the produce of one acre, of either *Swamp* or *Pine Land*.

3d, For the greatest quantity of *Rice*, the produce of one acre of either *High* or *Low Land*.

4th, For the greatest quantity of *Root* or *Slip Potatoes*, the produce of one acre, of either *High* or *Low Land;* the acre to be square, and not more than 210 feet square; the crops must be planted and harvested, within the period of 12 months.

5th, For the best *Calf*, one year old, raised by the competitor, and exhibited at the said meeting in January; this premium to be continued annually, until the animals reach the age of five years.

6th, Also a premium of Ten Dollars, or a Silver Mug of that value, for the best *Hog*, raised by the competitor, not more than one year old; this premium to be awarded annually until the animals reach the age of three years. Should the animals exhibited not be deemed above mediocrity, the Society will not award a premium. Relative to the Crops, a detailed account of the mode of culture, and preparation of the land, is requested. It is expected all candidates will produce such testimony as to prevent any doubts relative to the correctness of their statements, in regard to the age of their Animals, and the Produce of their Fields.

JOHN S. BELLINGER, *President.*
JENNINGS O'BANNON, *Sec'ry.*
Barnwell Court House, Jan. 28th, 1822.

* * *

FROM THE KENHAWA SPECTATOR.

SALT.

It is extremely gratifying to the public, that the manafacturers have sold the whole of the salt, they are limited to make this year, to Messrs. *Wm. and Robert M. Steele.* Persons having any trade of business on the Kenhawa river, must feel it to be their interest, that this arrangement has taken place.—The sale has been made to those gentlemen, at a moderate price, and upon very accommodating terms; which will, without question, enable them to supply the markets in the western country, at a very low rate, and to come in competition with any salt in the United States. They have taken the precaution in their contract, to stipulate, that the salt shall be of the first quality.—The manufacturers of this article, are sensible of the importance of attending to this particular; and of the injury Kenhawa has hitherto sustained in its reputation, by neglecting to have their salt made perfectly pure. They are determined this year, that their salt shall be equal in quality, to any, either imported, or manufactured in the United States.

* * *

TO THE EDITOR OF THE AMERICAN FARMER.

Worcester, May 12, 1822.

John S. Skinner, Esq.

Sir—Having noticed in your paper a few weeks since an account of the profit in keeping swine, I requested Mr. Rufus Porter, of this town, to furnish me with the result of an experiment made by him the last year, for the purpose of ascertaining the actual expense in keeping swine, and how far they would be profitable to those who should keep a greater number than sufficient to consume merely the waste of the house. He was so obliging as to exhibit to me his book on which the grain is charged at the several times at which it was carried to mill for grinding; and at the highest market prices in this place. As the several items would make the statement somewhat tedious, I have presumed that it would be equally satisfactory to you to be furnished with the aggregate of the several kinds of grain, which I carefully abstracted from his book under his inspection and with his assistance.

The account is as follows:

On hand April 1st, 1821, 8 hogs weighed 1000lb. a $4.		$40	
Nine pigs a 50cts. each.		4 50	
1 shote (last spring pig) purchased in October, and 1 shote purchased in December following		13	$57 50
Grain consumed by these 17 swine from the 1st April, 1821, to 31st March, 1822 inclusive, and the 2 others, from the time of purchase to 3d April last.			
79 bushels corn and cobs	at 30 cts.	$23 70	
21 bushels corn	at 58⅓	12 25	
90 bushels rye	at 75	67 50	
11 bushels oats	at 33⅓	3 67	
56 bushels barley	at 62½	35	
		$142 12	
Wash from the house, valued at		15	157 12
Time in taking care of the hogs and in going to mill with the grain, with the use of horse and wagon			20
Carting mud taken from ditches, into hog yards, and value of straw used as litter			14
			$248 62
Profit in keeping the swine			78 72½
			$327 34½

CREDIT.

1821.		
Nov. 20	killed 3 hogs wt. 842lbs. a 5½	$46 31
25	killed 1 hog wt. 144lbs. a 5	7 20
1822.		
January 15	killed 4 hogs wt. 890lbs. a 5¾	51 17½
Feb. 27	killed 3 shotes wt. 461lbs. a 6	27 66
March 20	killed 2 shotes wt. 300lbs. a 6	18
	Pork 2637lbs.	150 34½
On hand March 31st 1822, 6 hogs estimated weight 1200lbs. 4 of them being sows forward with pig, which could not be weighed, the whole of them would readily have sold for, and were appraised at		72
70 loads of manure which to have purchased and placed on the farm would have cost not less than $1 50 per load.		105
		$327 34½

I have not been able to learn that there is any thing peculiar in Mr. Porter's manner of feeding swine. The grain was all of it ground into meal, the swill was made by putting 2½ bushels meal to 100 gallons of water and permitted to stand until fully fermented, being frequently stirred.—When fatting his hogs, the quantity of meal was encreased to 4 and 5 bushels; he continued to sour the swill in the autumn until the weather became so cold as to freeze it, he is now about preparing an apartment which will be sufficiently warm to enable him to make use of fermented swill during the winter months. He thinks that the saving in grain in using fermented, in preference to unfermented swill, is not less than 30 per cent. and is much preferred by swine. Although he has made no experiment to ascertain the relative value of the different kinds of grain as food for hogs, he is of opinion that *rye* is the most profitable.

The food mentioned in this statement, was all that was consumed by the hogs; no vegetables were given to them, and being confined in yards they had no opportunity to obtain other food for themselves. Had vegetables been used, I am satisfied that the expense would have been diminished, and the quantity of manure much encreased, consequently the profit in keeping them would have been greater. Much manure of a good quality may be made by the assistance of swine in furnishing them from time to time with weeds and other vegetables of no value; the giving them to hogs to consume and to be made into manure, would occasion but little trouble and the expense would be very small. This might be done at a leisure moment, and the advantage to the land in clearing it from weeds, would be a full compensation for all trouble and expense.—That the value of the manure made by a hog supplied with suitable materials and properly kept at work, is greater than that of the grain necessary to fatten him, I have no doubt. I believe that the profit on this kind of stock, might under other circumstances have been greater than in this instance. The hogs, with which this account commences, were inferior of their kind, certainly below mediocrity; the aggregate of the 8 when fatted being only 1876lbs. which is less than 6 good hogs should have weighed. Notwithstanding this, I think that Mr. Porter has realized a greater profit than he has credited.—The grain he has charged at a high market price, and not at his own door, but in the centre of the town; and to have effected a sale at the prices quoted, he must have conveyed it to market, at as much trouble and expense as to convey it to mill for grinding for his hogs; therefore that part of the charge might have been omitted, but as he was desirous of ascertaining what would have been the expense provided he purchased all the grain they consumed, perhaps this expense is properly set down. The *wash* from the house is estimated at a high price; he keeps a dairy of 6 cows, but the hogs have no benefit from it, excepting the butter milk and whey, and his family is not large. The *mud* carted into the hog-yards was from the opening of ditches, which he was obliged to remove from the land, and could as easily be placed in his hog yards as elsewhere.—The valuation of the hogs on hand at the expiration of the year is certainly not extravagant, and they might reaily be sold at the price at which they were appraised. The valuation of the manure is reasonable. The hogs I saw several times during the year, they were kept in good condition. It is to be observed, that it was not the intention of Mr. Porter in keeping this account to lay it before the public; it was done for his own information, he therefore could have no inducement to attempt to deceive himself, and I have not been able to discover either by my own observation, or by enquiries of his more immediate neighbors, that any deception has been used. Above all, he is of too respectable a character to be willing, knowingly, to offer delusive representations.—On the facts contained in this statement every farmer can make his own comments; from me any would be unnecessary.

I am Sir,
Very respectfully,
Your most obedient Servant,
JOHN W. LINCOLN.

N. B I should have mentioned that the meal given to the hogs by Mr. Porter, was not scalded, he not then having a convenient place for doing it, but it is wise to scald the meal before making it into swill, in all cases where it is practicable, as more profitable; it causes it to ferment sooner, and is believed to yield more nourishment.

* * *

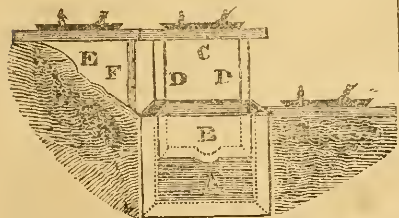
FOR THE AMERICAN FARMER.

THE ECONOMICAL HYDROSTATIC LIFT.

A Desideratum of superior importance in Inland Navigation; being a very convenient and expeditious operation, so arranged, upon a new plan, that an uninterrupted succession of ascending and descending boats, or other craft, with their cargoes on board may, with the utmost facility and safety, be floated over any common summit-level, or incidental impediment in the Route, to which only a small portion of water, can be constantly brought; very little more than will be required merely to restore the unavoidable waste, daily resulting from evaporation and absorption; in consequence of the same supply being retained, in such a manner, that it will always be ready, and may be used over and over again, as often as occasion shall require.

The plan here proposed is considered as being susceptible of a very general and advantageous application, comprehending all the practicable varieties of purposes and situations incident to Inland Navigation of every description, wherever the object shall be, to introduce, improve, or extend any water communication, by means of interposing one or more Lifts, between two or more levels or sections of the contemplated Route. It may, for example, be carried into effectual operation, in the manner represented in the following,

Description and Specification:



In a rectangular well, A, of sufficient length, breadth and depth, let an air chest, B, of the required magnitude be so immersed in water as to be near the bottom when it is lowest and under the surface when in its highest situation. By suitable posts or pillars, DD, of iron or wood let a moveable section of canal, or water Route, C, be securely supported in a perpendicular situation over the above mentioned air-chest, at whatever height shall be necessary, to correspond with the height of the intended Lift. This moveable section is to be constructed of wood; open at both ends; but as near each end as will be convenient in practice, a gate is to be closely fitted, to be made in such form or manner, and of such material or materials, as upon trial shall be found to be the most effectual in preventing leakage, and in promoting their being opened and shut with the greatest facility.—

Let, both the lower extremity of the upper level, E, supported by pillars as at, F, and the upper extremity of the lower level, G, at the place of the proposed Lift, be made to terminate in a trunk of wood; let each extremity be furnished, also, with a gate similar to the gates in the ends of the moveable section: and let the respective ends of the section and trunks, be constructed of the same size, and so fitted and adjusted that whenever they shall be brought into contact, and forced together by means of clamps, or otherwise, little or no water will be suffered to escape. In determining the ground plan, these trunks are to be located in the most eligible situation, and at the required distance, from each other, for the moveable section to be alternately connected, with either, as occasion shall require.

Any inconvenience that might otherwise occur in consequence of the air-chest and moveable section deviating from their perpendicular situation may be obviated by means of four suitable iron, or other projections, being made fast to the corners of the former, and four others to the corners of the latter, at right angles respectively with their sides, having notches provided in their outward ends, that shall be adapted to slide upon four iron or other guides, attached, in the required position, to upright posts of wood, extending from the bottom of the well, to the top of the Lift. Any premature ascent, or descent of the air-chest, and moveable section, after they shall have attained their highest or lowest position, may also be prevented by the application of such clicks, springs, or other appropriate fastenings, as may be deemed the most convenient for that purpose. And in the event of the air-chest being so constructed, as to be liable to admit a small portion of leakage, a suitable cavity may be provided in the bottom, into which the water shall, from time to time, be collected to such a depth, that by means of a pump, it can readily be so far exhausted, that the residue shall not be productive of any material disadvantage.

The magnitude of the air-chest must be adapted to the heaviest tonnage that may reasonably be expected to be the subject of its operation. Should it be concluded, for example, that it would not be necessary to provide for a greater weight than 30 tons, an experimental calculation might be thus assumed: It is understood, that the weight of a cubic foot of water, is about 62½ pounds; but to make a competent allowance for leakage, in case it should occur, let only 56 pounds, that is half a hundred, be estimated as the weight of that proportion of a cubic foot that may, in this instance, with certainty be applied. Agreeably to these premises the number of cubic feet in the capacity of the air-chest would require to be equal to the number of half hundreds in 30 tons; that is 1200: admit, then, that 50 feet long, 8 wide, and 3 deep, were assumed for the dimensions in question; 8 times 50 are 400; and 3 times 400 are 1200 cubic feet, which exactly corresponds with the number of half hundreds in the tonnage proposed. Had the weight of 40 tons been assumed, instead of 30, the depth of 4 instead of 3 feet, would have been the result, admitting the 50 feet long, and 8 wide to have remained the same.

To the size of the air-chest, both the size of the well and the size of the moveable section will require to be adapted. It is evident that the length and breadth necessary for the latter, must be sufficient for it to receive the Boats or whatever else was intended to pass through it. Its depth must be so adjusted, that it may contain a quantity of water sufficient to form an equilibrium with the air-chest; or even to preponderate, and cause both to descend to their lowest situation. In determining the size of the well it will be necessary that its inside dimensions, shall so far exceed the outside dimensions of the air-chest, that the space between them, shall be sufficient to admit the water to flow freely, through it: otherwise, in the event of the intermediate space, in this respect, being too limited, the ascent and descent of the Boats and their cargoes, must, necessarily be retarded in proportion, and may, possibly, be rendered so slow, as to occasion great detention. The proper allowance, however, will require to be determined by actual experiment, at least upon a small scale. Until this shall be done, perhaps the distance of eighteen inches or two feet all round, would be deserving of a trial.

Under a due consideration of the foregoing premises, it must be conclusively evident that the natural tendency of the air-chest, will be, to continue to float, either partly above, or, at least at the surface of the water, as long as the quantity of the fluid which it displaces shall be specifically heavier than the weight of its own pressure, into the water, added to the weight of its incumbent appendages. But let a preponderating portion of weight only be added to the said incumbent weight, so that the displaced quantity of the fluid shall be specifically lighter than the pressure of the said weight into the water, and it will then follow with equal certainty that the air-chest will necessarily descend, together with the moveable section, to their lowest situation. And because the said descent was produced, merely, by a preponderating weight being added for the very purpose of producing that effect; it can only be necessary to take away the preponderating weight so added, to cause the air-chest, immediately, to reascend with the moveable Section, by which means, they will both regain ther former situation.

Thus it appears that the air-chest and moveable section may be made to descend and ascend, the former in the well and the latter between the upper and lower trunks, at pleasure, merely, by a small preponderating addition to, or deduction from the weight incumbent upon the air-chest; after the original weight shall have been previously adjusted to the capacity of the said chest. Hence the following may be adopted as.

The manner of Operation:—

Admit the moveable section to have been elevated to its upper situation, and the safety fastenings to have been applied; also the quantity of water to have been adjusted to the capacity of the air chest and the moveable section, to have been connected with the upper trunk. Then, in the event of there being a descending Boat in the upper level—let the two gates leading into the moveable section be opened and the Boat propelled forward into the said section. As the Boat advances, whether it be empty or loaded, or the cargo heavy or light, an equal weight of water, pound for pound, will be displaced and caused to flow backward, out of the moveable section, through the open gates into the upper canal or level of the route, then shut the said gates, and after the fastenings of the moveable section shall be made loose, let the boatmen step on board. They will then be the preponderating weight, which, in the event of its being sufficient, will immediately cause the air-chest to descend, in the well, to its lowest situation, by which means the moveable section will be brought to co-incide with the lower Trunk, where it is to be secured with the safety fastenings, and connected with the said lower Trunk.

Then if the gates leading out of one end of the movable section, be opened, and the Boat propelled forward; as it *advances into the lower level*, an equal weight of water will be displaced there, and made to flow back into the moveable section; provided it shall be prevented from running ahead by introducing a gate a little forward from the Boat, in the lower level; so that now the original weight of water, probably, with the loss of a little leakage, will be restored into the moveable section; and the descending Boat will also be placed in the required situation, ready to pursue its appointed route.

In the mean time, should an ascending Boat be present,—immediately after the descending Boat has been propelled out of the moveable section, let the ascending Boat be propelled into it; by which means an equal weight of water will be displaced, out of the said section, and caused to flow downward, through the open gates into the lower level. When the gates shall now be shut, let care be taken to cause the ascending boatmen *to be on board*, so that, their weight of water may also be expelled downward and shut out, together with that of the Boat and its cargo. The moveable section is then to be detached from the lower trunk, and after the boatmen shall have stepped off, upon the bank, by the time they shall have reached the top of the Lift, by means of a ladder or otherwise, the air-chest and its appendages, including the Boat and its cargo if any, will have attained, or, at least, be steadily pursuing their ascent, to their upper situation. It will then only remain to secure the safety fastenings, to connect the moveable section, with the upper trunk, to open the gates, and propel the Boat forward in pursuit of its destination.

In case of there being one or more ascending or descending boats, and no boat pursuing the opposite direction, as no water would be displaced, the weight of the boat that was wanting, would, at every operation be supplied by the water, that was not removed out, remaining in the moveable section. Should any difficulty occur in such cases on account of there being no boatmen to step off or on, as a preponderating weight, the deficiency may be easily supplied by letting a sufficient quantity of water into, or out of the moveable section, for that purpose; or whenever there should be a redundancy of water in the air-chest, it would be preferable, to pump out the required portion from thence, instead of letting other water escape. Or should it be desirable, on any other account, to vary the operation, a crane and weight; a block and pulley; two or more racks and pinions, or some other mechanical apparatus may be adapted.

Where the declivity shall prove so great as to require two or more lifts to be constructed near to each other, particular care should be taken to arrange their several positions to the best advantage; and, more especially, in such a manner, that between every two lifts there may be an intermediate section of canal, sufficiently long, wide and deep to receive, at least, one ascending and one descending boat, at the same time, and to let them pass each other with facility, otherwise, a series of interruptions and delays that ought to be avoided would be certain to follow.

Having given a distinct explanation of the manner of ascending one lift, it is evident that to "float a boat over any summit-level, with its cargo on board," as before stated, it will only be necessary to repeat the same operation, time after time, as often as shall be required to reach the top of the last and highest elevation, and after having passed across, to its other extremity, to descend lift after lift, according to the manner of descent before described, to the lowest and last level at the bottom of the high ground over which a water conveyance, may, in this manner, with facility, be accomplished.

Beside the immense saving of water that appears to be perfectly practicable in pursuance of this plan, the advantages, to canal companies, in other respects are of the utmost importance.—The situation of the proposed rectangular well is such that it will be entirely convenient for it to be substantially embanked around to any extent that may be desirable. Hence its position will be extremely favourable for securing it, in the most effectual manner against the injuries of intense frost. Hence too, instead of a great abundance of stone work of the most difficult and costly description, even of hewn stone, as is required in locks of the usual construction, clamped and bound together in the most substantial manner, and at a very heavy expense, amounting, according to situations and circumstances, from eight to ten or twelve thousand dollars for every foot lift, it is presumed, that good quarry stone, faithfully put together in a strong and durable manner, would in the walls of a well, be amply sufficient to answer every necessary purpose. It has, in fact, been estimated that at least one third, or probably one half of the money that is usually expended, in the construction of stone locks might with convenience be saved.—Another circumstance highly favourable to the adoption of the improvement under consideration is, its vast superiority in point of expedition, when compared with that of common locks. Wherever there should be such a declivity upon the route as to require a number of these locks in succession, no boat could ascend while others should continue to descend; neither could any descend until others had ceased to ascend; whereas according to the said improvement their alternate ascent and descent would be perfectly convenient, and preferable in every respect. Thus, there would be a double portion of business accomplished in the same time, and with equal facility, admitting the supply of water for the locks was so abundant as never to occasion the least detention.

Again, the savings that may rationally be anticipated in relation to the purchase of water-power, and mill-property, would in many instances be immense. The quantity of water required to fill large locks, more especially for an extensive trade, according to the usual method of *locking up* and *locking down*, is so enormous, that nearly the whole of a common mill stream would be necessary, or however, to such an extent, that upon some routes many valuable establishments would be literally ruined, and many more very materially injured. Under these circumstances the different mill owners, to a man, would be certain to be upon the alert, in swelling their respective charges for damages to the utmost amount possible; whereas, in consequence of the very reduced quantity of water to which the real necessity of the case may now be limited not exceeding a supply of a very few square inches, at most, it would rarely if ever be felt by the millers, and would at the same time, be abundantly sufficient for the purpose. From the incalculable advantages that all such property holders would be certain to derive in consequence of their having a water conveyance, immediately from their mills to market, the value of their property would be very much enhanced. Every individual amongst them would be deeply interested in promoting the route of the proposed canal being located as near to them as possible. They would be deeply interested not only in furnishing, the few square inches of water that would be required, entirely clear of expense, but might invite an acceptance of the land and materials that would be wanting, and become liberal subscribers for the stock that would be necessary for carrying promptly into effect an object of the most general and extensive utility. An object, that in addition to the certain and rich harvest, both of profit and honor, which it is capable of securing to the original undertakers, must, from its very nature, be increasingly beneficial to millions after millions of inhabitants, through successive ages.

WM. KENWORTHY.

Washington, 24th May, 1822.

"THE DESERTED VILLAGE."

The following account of the origin of Goldsmith's beautiful poem is from the London Magazine for February, 1822.

"The poem of the Deserted Village took its origin from the circumstances of General Robert Napper having purchased an extensive tract of the country surrounding Lissoy, or *Auburn;* in consequence of which many families, here called *cottiers*, were removed to make room for the intended improvements of what was now to become the wide domain, warm with the idea of changing the face of his new acquisition; and were forced "with fainting steps," to go in search of "*torrid tracts*," and "*distant climes*."

This fact alone might be sufficient to establish the seat of the poem; but there cannot remain a doubt in any unprejudiced mind, when the following are added, viz:—That the character of the village preacher, the above-named Henry, (the brother of the poet) is copied from nature. He is described exactly as he lived; and his "modest mansion" as it existed. Burn, or the name of the village-master, and the site of his school-house, and *Catherine Girachty*, a lonely widow;

The wretched matron, forced, in age for bread,
To strip the brook, with mantling cresses spread;

and to this day the brook and ditches, near the spot where her cabin stood, abound with cresses; still remain in the memory of the inhabitants, and *Catherine's* children still live in the neighbourhood. The pool, the busy mill, the house where "*nut-brown draughts inspired*," are still visited as the poetic scene; and the "*hawthorn bush*" growing in an open space in front of the house, which I knew to have three trunks, is now reduced to one; the other two having been cut, from time to time, by persons carrying pieces of it away to be made into toys, &c. in honour of the bard, and of the celebrity of his poem. All these contribute to the same proof; and the "*decent church*," which I attended for upwards of eighteen years, and which "*tops the neighbouring hill*," is exactly described as seen from Lissoy, the residence of the preacher.

I should have observed, that Elizabeth Delap, who was a parishioner of mine, and died at the age of about ninety, often told me she was the first who put a book into Goldsmith's hand; by which she meant, that she taught him his letters; she was allied to him, and taught a little school."

* * *

The following advertisement respecting Linseed imported into Scotland, is taken from the "Caledonian Mercury" of Feb. 16, 1822, printed at Edinburgh. It behoves the exporters of the article from the United States, to attend to the hints contained in it.

LINSEED.

NOTICE TO DEALERS AND BUYERS.

THE COMMISSIONERS and TRUSTEES for MANUFACTURES, &c. in SCOTLAND, hereby intimate, that if any person shall either IMPORT, or sell, or expose to sale, any Linseed that is bad, or damnified, or not thoroughly cleaned; *or shall mix different parcels of Linseed together;* or if he shall sell it under a *false denomination*, either as to its age, or the country where it grew; all such seed, or the price thereof is liable by law to be forfeited, and the proprietor or Vender is also liable in a heavy penalty.

The only Linseed which, by a law of the State, is permitted to be exported from Riga, *as sowing seed*, is that produced in the *immediate preceding harvest*, which must be exported *in Casks*, branded with the *year of its growth.* It is recommended to the Flax Growers, therefore, to Buy no Seed, unless they are quite satisfied that, it is *new*, *sound*, *and unmixed*, as such only can be depended on for producing a good crop.

Every Seller of Linseed or Hempseed in Scotland, is by Law obliged, under a penalty of not less than 50 Shillings per hogshead, to deliver along with it, to the Buyer, a Certificate, *subscribed by him*, mentioning the Quantity, the Price, the Port from whence the Seed was imported, the name of the Country where it grew, and the Year of its Growth.—And the Buyers ought invariably to exact and keep those Certificates; because if they should afterwards find that they have been imposed upon in the description of the Seed, they may thus the more easily prove the fraud, and obtain legal redress.

It is to be observed, that those who have reason to believe they have got *mixed* Seed, or *old Seed instead of New*, are entitled to have the *servants* of the dealers, as well as other persons, examined upon oath as to those facts.

It is understood that an extraordinary practice prevails with respect to American Linseed; (and may sometimes be applied perhaps to other seed.) It is this: The barrels are branded, not with the year of the growth of the Seed, but with the year of its sale. Buyers therefore cannot, from the branding, know any thing of the age of the Seed, but must look to the written certificates of men of character, as the proper evidence of that important fact.

In case of Linseed being damaged in the conveyance by sea, the importer may have it protected from seizure, provided that, *immediately* on landing it, he produces an affidavit by the master of the vessel, as to its having been damaged in the conveyance, and tender security to the undersigned that it shall be crushed into oil or exported.

The Surveyors are instructed to seize all bad, or dammified, or mixed Linseed, for whatever purpose imported, and to sue for the forfeiture and penalties, in terms of the Acts 13th George I. and 24th George II. And, after a seizure, no application or offer of security will be at all regarded by the Trustees, but the Surveyor will then sue for the forfeiture of the Seed.

By Order of the Trustees,
WILLIAM ARBUTHNOT,
Secretary.

The Law requires that all Linseed or Hempseed, whether of foreign or home growth, must be sold by the Linlithgow barley measure streaked; and such measure must be first marked and stamped by the Dean of Guild of some Royal Burgh, with the usual mark of such burgh; and also with these words, "*Linlithgow Barley measure.*"

GOOD NEWS FOR MANUFACTURERS.

There is one provision in the Military Appropriation-bill, introduced at the suggestion, in the first instance of Mr. *Eustis*, which we understand will be of much importance to a meritorious class of People; we mean the Manufacturers of Woolens, who have little more capital than their looms. They cannot contract for large supplies: nor can they suddenly comply with large orders. An appropriation has therefore been introduced into the Bill, of seventy-five thousand dollars, for the purchase of Woolens for the Army, for the year 1823; so far as to allow the goods to be purchased of our own Manufacturers, and to allow intermediate time sufficient for the manufacture of them. It is predicted that we never shall again have a Soldier (and hardly a Sailor) clothed in the Manufactures of any other Country than this. So be it. This is a sort of encouragement which will be of some service, not to overgrown and already pampered Capitalists, but to the industrious Artizans who live by the labour of their hands.—*Repos.*

EXCAVATOR.

Harris's excavating machine was tried at Batavia, New York, on the 1st inst. A child four years old could raise with ease from 8 to 10 hundred weight.—*Plough Boy.*

* * *

It is much to be feared that the Crop of Wheat will be very light this harvest. We learn that in Washington, Frederick and Montgomery counties, all famed for the growth of wheat, there will scarcely be any crop at all, and on the Eastern Shore, the fields that have been opened by the frost, are now wasting under the effects of fly and sedging. The average crop in Maryland cannot be more than half a crop from present appearances, and the fear is that it will be much less even than that.—*Easton Gazette.*

JOHN SCOTT,

Chemist, late of Edinburgh, by his Will, made in the Year 1816, bequeathed the sum of *four thousand dollars* in the funded three per cent. Stock of the United States, to the Corporation of the city of Philadelphia, to the intent "that the interest and dividends to become receivable thereon, should be laid out in Premiums to be distributed among ingenious men and women, who make useful inventions, but no such premium to exceed Twenty Dollars: and that therewith shall be given a Copper Medal with this inscription—"To the most Deserving." The Select and Common Councils of the city of Philadelphia, have intrusted "the Philadelphia Society for promoting Agriculture," with the distribution of the aforesaid premiums and medals, and a Committee of that Society have been appointed to attend thereto. The subscribers named as that committee, give notice that they will receive applications for the first premiums and medals to be awarded by them, on or before the first day of June next.

The second award will take place on the first day of January, 1823. Applications to be made one month before that day.

Certificates of the originality and utility of the inventions, must accompany the applications, which may be directed "to the Committee of the Philadelphia Society for promoting Agriculture, on Scott's legacy," and forwarded free of expense, through the post Office.

Descriptions of the inventions, must be given in clear language, and correctly written, accompanied by drawings in perspective and detail, where necessary to illustrate them. Where the invention is a composition of matter, specimens of the ingredients and of the composition of matter sufficient in quantity for the purpose of experiment, and to preserve in the Cabinet of the Society, will be expected.

RICHARD PETERS,
JAMES MEASE,
ROBERTS VAUX,
STEPHEN DUNCAN,
NICHOLAS BIDDLE,
REUBEN HAINES.

Philadelphia, May 16*th.*

MATRIMONY.

A father wished to dissuade his daughter from any thoughts on matrimony. 'She who marries does well' said he, 'but she who does not marry does better.' 'My father,' she meekly replied, 'I am content to do well; let those do better who can.'—*Walpoliana.*

FOR THE AMERICAN FARMER.

ORIGIN OF SOME OF OUR VEGETABLES AND FRUITS.

Turnips and carrots are thought indigenous roots of France; our Cauliflowers come from Cyprus; our Artichokes from Sicily; Lettuce from Cos; Shallots, or Eschallots from Asculon; the Cherry and Filbert, are from Pontus; the Citron from Media; the Chestnut from Castana, in Asia Minor; the Peach and Walnut, from Persia; the Plum from Syria; the Pomegranate from Cyprus; the Quince from Sidon; the Olive and Fig from Greece, as are the best Apples and Pears, though also found wild in France, and even here; the Apricot is from Armenia.

Thus it is that by the genius and industry of man, races of plants, like those of animals, are transplanted from their indigenous soils, to distant regions of our globe, where they flourish and bring forth fruit to supply the most wholesome nourishment of life, and add to his comforts.

THE FARMER.

BALTIMORE, FRIDAY, MAY 31, 1822.

PRICE CURRENT—CORRECTED WEEKLY.

Flour from the wagons, $6 62½—Wharf do. $6 50—Wheat white, 143 to 144 cts.—Red, do. 140 to 142 cts.—Corn, the market not so well supplied this week as usual—the price expected to improve—sales have been made, white, 75 cts. —Yellow, 70 to 72—Rye, 65 to 70 cts.—Oats, 40 to 45—Bran per bushel, 15 to 17 cts.—Shorts, do. 20 to 22 cts.—Plaster of Paris per ton, $3 50—Soal Leather per lb. 25 to 27 cts.—Skirting, do. 30 to 33 cts.—Upper whole side, $3 to 4 25—Candles mould per lb. 15 to 17 cts.—Dipped, do. 13 to 14 cts.—Spermaceti, 35 cts.—Beef fresh per lb. 8 to 12½ cts.—Pork, 6 to 9 cts.—Veal, per lb. 6 to 10 cts.—Mutton per lb. 6 to 8 cts.—Lard per lb. 12 cts.—Butter per lb. 31 to 37½ cts—Chesse per lb. 12 cts.—Eggs, per dozen, 12½ cts.—Hickory wood $4 50 to $5—Oak, do. $3 to 3 50—Pine, do $2 25 to $3.—Tar, North Carolina, $2 25—Rosin, $2 25—White pine boards per M. $10 to $30—Bees' wax, per lb. 37½ to 40 cts.—Salt, Liverpool coarse per bushel 50 to 55 cts.—Turks Island, 65 to 70—St. Ubes, per bushel, 53 to 55.

Maryland tobacco. Fine bright quality continues in demand, and sells at high prices, ranging as before quoted, from $18 to $32—Common Tobacco very dull. Through the politeness of Mr. Makall, Inspector, we have received several samples of a very excellent quality, which we shall exhibit this day at the Maryland Cattle Show for the examination of Planters.

Printed every Friday at $4 per annum, for John S. Skinner, Editor, by Joseph Robinson, at the North West corner of Market and Belvidere-streets, Baltimore, *where every description of Book and Job printing is executed with neatness and despatch*—Orders from a distance for Binding, with proper directions, promptly attended to.

AGRICULTURE.

SECOND AGRICULTURAL EXHIBITION
OF THE MARYLAND SOCIETY.

The public will have great reason to be well satisfied with the second exhibition of fine animals, good implements, and skilful ploughing which took place under the arrangements of this Society, on the two last days of May; and of which we will present the official account as soon as it can be furnished.

In the mean time, under a resolution offered by Mr. Virgil Maxcy and unanimously adopted by the Society, we publish an address that was delivered to the Members by their President, Mr. Robert Smith, who has on this occasion displayed great research and treated some important subjects with his usual ability.

ADDRESS.

Gentlemen,

The addresses, which, from time to time, I have had the honor of submitting to the consideration of the Society, have been made in the humble expectation that other members, better qualified to communicate useful instruction, would have considered the example not unworthy of imitation. An unreserved communication of our respective practices, and a free interchange of ideas thereon, could not fail to lead to the most beneficial results. Although by those principles of deference, which regulate the ordinary intercourse of gentlemen, we are not permitted to talk of ourselves or of our deeds, yet in the affairs of agriculture such a license is, with the greatest propriety, allowed. It is under this indulgence, I shall, on the present occasion, take the liberty of bringing into view some few arrangements which have recently been made at my Dairy Farm, Orange, two miles from the city of Baltimore. The narrative of facts will be interspersed with explanations; such, indeed, as to most gentlemen will appear but common-place observations; but as they possibly may have a tendency to afford useful hints to some of our practical farmers, it is deemed proper to introduce them.

Experience, which teaches the most useful lessons, has taught us, that, in all the various walks of agriculture, farm-yard manure is indispensably necessary; that a due supply of this essential ingredient is not attainable but by means of a sufficient number of live stock, and that such a stock cannot be kept on a farm unless its products be adequate to their sustenance. The great desideratum, then, with a view to manure, and of course to the improvement of our estates, is to adopt such a course of practice, as may be the most likely to enable the farmer to maintain the greatest number of stock upon a given quantity of hay, straw, corn-fodder, and other provender.

Economy in the feeding of stock is an object of the highest importance, interesting alike to the publick and to the individual. The great waste of hay, straw, corn fodder, chaff and other offal, apparent on every estate under the prevailing practice of our country, has suggested to me the expediency of having at my dairy farm, a steaming apparatus. This I have recently established upon a plan so simple and so cheap, that any person in any part of our country may have a similar one, greater or smaller, according to the extent of his farm and to the proposed number of his stock. It consists of an iron boiler and two wooden boxes. The boiler contains 100 gallons. One of the boxes is 8 feet, the other five feet long, both 3 feet wide and 3 feet deep. The boiler is globular and was made by screwing together the brims of two salt-pans. There is also attached to it a hogshead for any extra-cooking.

The boiler is fixed in brick work, calculated to afford the greatest degree of heat, with the smallest waste of fuel. Without pretending to give directions as to the particular construction of such a furnace, I would merely remark, what the Physiologists have told us, namely, that heat being produced by the combined operation of the fuel and of the air feeding the fire, that portion only of the air, which passes in contact with the burning fuel, contributes to the production of the heat, and that, therefore, if the fire place should be larger than the heap of burning fuel, a certain portion of air will insinuate itself without going through the fire, and of course not being decomposed, will contribute nothing to the heat.

To the water in the boiler is given all the heat necessary to generate the required steam. The steam is conveyed into the boxes by copper pipes attached to the upper part of the boiler, and is introduced between the bottom of each box and a false bottom consisting of several sheets of copper perforated with holes. Into this chamber four inches high, formed by the two bottoms, the steam is conveyed, and passing through the holes of the false bottom, diffuses itself throughout the whole contents of the box, and thus effectually cooks the great mass of feed therein contained. When sufficiently boiled the steam by means of a common stop cock is turned into the other box. At one end of each box, and near the bottom, is a spigot and faucet, by means of which are drawn the condensed steam and the liquid matter, which had oozed out of, and had been extracted from, the cooked materials. This decoction is of a deep chocolate colour and highly flavoured. It may be given to the calves, or it may be returned to and mixed with the steamed food. It, however, may not be amiss to remark, that when a liquid feed is prepared the false bottom is not used.

In the corner of the steam house next to the pump, there is a hogshead of water in which is inserted a leaden tube, the other end of which is immersed in the water of the boiler and nearly to the bottom of it. The admission of the requisite supply of water from this reservoir into the boiler is regulated by a stop cock. And the cold water, being specifically heavier than the warm, will necessarily take its place at the bottom, whilst the hot water will remain at the top. By means of a stop cock it can at any time be ascertained when there is not a sufficiency of water in the boiler. This simple plan is preferred to the self supplying valve, which is apt to get out of order. At the top of the boiler there is a safety valve for the escape of all redundant steam, the electrick force of which would otherwise endanger the whole establishment.

Water, when boiling, has attained the highest degree of heat of which it is susceptible. Beyond this point it cannot be heated. All the additional heat, from any increase of fuel, combines with the water and passes off with it in the form of steam.

Although the limitation to the heat of water has been ascertained, the limitation to the heat of steam has not yet been discovered. The minimum, however, of the expansive force of this electrick fluid is at the boiling point of water, and this is, I believe, the maximum of the force required in the operation of cooking potatoes, turnips, ruta baga, mangle wurtzel, or any feed for dry cattle. But when a liquid feed is to be boiled for cows in milk, there must be additional fuel to counteract the effects of the great mass of cold water, and to be continued until the water ceases to condense the steam in the pipe. The steam, coming into contact with the cold water, being suddenly condensed, a vacuum is necessarily formed in the end of the pipe. Into this vacuum the water and steam both rush with a considerable noise. When, therefore, the water becomes so warm as not to condense the steam, this noise ceases, and then the quantity of fuel may be diminished.

Water being a non-conductor of heat, heat cannot be made to descend in it. The tube therefore conducting the steam from the boiler, should open into the lowest part of the box, so that the steam may enter the liquid at the bottom. It then causes the water to boil in the wooden box as fire does when applied to the bottom of an iron pot. The particles of water at the bottom, next to the end of the pipe, are first heated and of course rarified, and thus becoming specifically the lightest, they ascend to the top. Their place is then taken by other colder particles, and these in their turn are heated and consequently rise, and so in succession until the whole be heated.—Should the steam be applied to the water at the top, the water at the bottom could not thereby be heated, because the hot rarified water being specifically the lightest, could not descend.

Mr. Curwen, an accomplished agriculturist of Great Britain, has for many years been in the practice of steaming the food of his numerous stock. And has been laudably employed in endeavouring to make his countrymen sensible of the advantages of the steaming apparatus. Notwithstanding his acknowledged good sense, and the great respectability of his character, he has not yet been as successful as might have been expected. Besides, the disposition which farmers in general have to look at every proposed improvement as a visionary innovation; they in this instance considered the mechanism of the apparatus of Mr. Curwen too complex, and the cost of it too high. As to its construction I have no knowledge; but as to its cost we have learned from a late publication that it was about 160 guineas.

Mr. Wm. Bear, of the city of Baltimore, the constructor of my apparatus, has stated to me that he can build such as mine at a cost from 60 to 200 dollars. A Boiler of the lowest price, containing 30 gallons, would be sufficient to cook food for the stock of most farms in our country. The capacity of my boiler is 100 gallons. It has enabled my people for sometime to cook every day, for more than 100 head of stock, nourishing food, consisting of cut hay, or straw, or corn tops and blades, or corn husks mixed with meal produced from the corn and cob ground together, or with other meal and a due proportion of water. When this food is intended for cows in milk, as much water is used as will serve to give it the liquid consistence of what is called a wash; but when it is prepared for dry cattle or for horses, so much water only is applied as is used in the common feed of chopped rye and cut straw.

Clover hay, corn tops, blades and husks when steamed, have been found greatly to contribute in the winter season to the improvement of the quality of the milk in so much as, in a great degree, to impart to the butter the yellow colour and delicate flavour, it would have received from the same articles in their green state. It is, however, proper to premise that to produce these pleasing effects, the clover hay and the corn fodder must be well cured. When cut straw has been used, these advantages, although very perceptible, have not, from the dryness of the straw, been so strongly communicated to the butter. If the steamed food should not be intended for cows in milk, or for cattle for the butchers, or for working oxen, or horses, but for stock going at large, there is no necessity to mix with it any meal whatever. And from the experience I have had, I have no hesitation in pronouncing that not only straw and corn fodder, but the very corn stalks, instead of "wasting their sweets in the desert air," may, if well cured and preserved, be converted into nourishing food for the maintenance of stock throughout the whole winter season.

Imperfect as is our knowledge with respect to the science of nutrition, yet the fact is well known, that cooking renders food more agreeable, more wholesome, and more nourishing. Water is not a simple element, but a compound capable of being decomposed; and it appears from a series of experiments made by Count Rumford, that water mixed with a given quantity of vegetable food and made into soup, will satisfy the hunger, and will support the health and the strength of a man, when with the same allowance of vegetable food by itself, and with the same quantity of water in a crude state, such person would absolutely starve. And Mr. Curwen, in a late publication, has stated that, in the feeding of stock, six stone of steamed turnips will go as far as nine stone of turnips not steamed. Vegetable matter being partially decomposed by the process of boiling, the digestive organs have less to do in converting it into nutriment. And it is a fact that the cows at Orange eat every meal most voraciously, although they are fed five times per day, and at every time each cow has half a bushel of steamed food.

The richness of the milk, the flavour, and yellow colour of the butter afford the most convincing evidence of the excellency of cooked food. And this is confirmed by experiments made from time to time, in suspending and resuming the steamed preparations. Besides, under this system every particle of the hay, of the straw, and of the coarsest offal is consumed. There is no waste. Every thing is eaten with avidity. It would hence appear that the steaming apparatus, converting, as it does, all vegetable matter whatever, coarse as well as fine, into the greatest quantity of nutriment, affords the united benefits of nutrition, and of economy. And in this country, where so little green food is raised for the maintenance of cattle in winter, the steaming of straw and corn fodder combines incalculable advantages. Besides it should ever be kept in mind that, in the feeding of animals, the provender ought to have bulk as well as nutriment. A certain distention of the stomach is requisite.

By the steaming apparatus every species of coarse vegetable offal may be converted into nourishing food, and all the ordinary provender may be made more nourishing. These facilities will, of course, enable the farmer to maintain an additional number of live stock. And this increase of stock will necessarily contribute to the increase of manure, the *Primum Mobile* in husbandry. But it is not enough to possess cattle that will furnish in abundance this all-important ingredient. It is moreover, necessary to bestow the utmost attention to its preservation and to its application. With respect to stable-dung, I shall, for the present, content myself by barely suggesting that my experience strongly inclines me to the opinion that, however long, it ought to be ploughed into the ground without any previous stirring, and as soon as practicable after it shall have been taken from the farm yard. Be this, however, as it may; my intention at present is not to discuss this subject, but to exhibit to the society a statement of a few arrangements recently made for the preservation and application of the *liquid* manure yielded by the stables and Barn yard at Orange.

The yard is situated to the south of the Barn; on its east and west sides are built cow-stables, which extend almost the whole length of the yard. In these stables, well ventilated, are several ranges of cattle standing in separate stalls and each secured by a chain and halter. At the tails of each range of cows, there is a drain, made of strong planks, fourteen inches wide and twelve inches deep, and so fixed as to receive all their dung and urine. These several drains have a sufficient declivity to carry all fluid matter to their southern terminations, where they intersect similar drains which convey all this liquid manure into a cistern fifty feet long, six feet wide, and six feet deep. This cistern is so placed and constructed as to receive not only the urine of the stables but also all the liquid matter of the farm yard. In it there is a pump by means of which its contents are pumped into a large hogshead fixed on a pair of wheels drawn by oxen. To the end of this hogshead is attached a box pierced with holes into which this liquid manure flows through a spigot and faucet, and is then sprinkled over the ground as the oxen move forward.

Before these drains had been made, the stables, notwithstanding the greatest exertions of two pains-taking men, were so wet and dirty, that the cattle could not be kept free from filth. But since they have been made, the stables have been dry and clean, so as to be comfortable to the cows, and agreeable to the milkers. But this is not all. One man has now so little difficulty in cleaning the stables that he has time enough for the currying of all the cows in the most careful manner. At the time of laying these drains, I was somewhat apprehensive, that they would prove to be too deep; but experience has shewn, that they have the recommendations of convenience as well as of cleanliness. Were they but five or six inches deep the cattle would often stand with their hind feet in them, and in such case the advantages of the drains would be but partially obtained.

In the middle of the farm-yard is a large trough supplied with water, for the stock, from a hydrant. This water is conveyed in pipes under ground from the milk house. A line of these pipes I am about laying so as to have a hydrant at the upper end of every drain, to furnish water for the washing of the stables. All the water employed in this operation, carrying with it the dirt of the stables, will flow down the drains into the cistern to the no inconsiderable increase of its invaluable contents.

The urine in the cistern contains not only its own constituent fertilizing properties, but it is also highly impregnated with certain portions of the dung with which it had been mixed, and among which it had flowed. The beneficial effects of this species of manure are practically known to all farmers. And Sir Humphrey Davey and other chymists have assured us, that urine contains in a state of solution the essential elements of vegetables. The highly celebrated author of the Code of Agriculture has, moreover, stated that Mr. Harvey of Glasgow by using cow urine has cut grass six times in a season, and that the average of each cutting was fifteen inches in length.

In conclusion, I would take the liberty of adding that such gentlemen, as may be disposed to make a trial of the advantages of the steaming apparatus, or of drains in their cow stables, are respectfully invited to visit my farm, Orange, so as to have an opportunity of viewing and examining in person all the details of the arrangements there made. From their own view, and from a careful examination of my manager and people, they cannot fail to obtain the most satisfactory information as to their practical effects.

FOR THE AMERICAN FARMER.

Proceedings of the Agricultural Society of Albemarle.

ON FALLOWS AND MANURES.

Sir, From my first commencing as a farmer, I have been struck with the great increase of the wheat crop, and the improvement of the land, from fallows made in July and August, over those made in September and October.—I will state the facts as I observed them; hoping that it may elicit something of more importance from others.

In fallowing for wheat in July 1812, upon a farm then under lease, I was desired by the tenant to leave a piece of land near his barn to stack his straw on. In ploughing the land a second time, he allowed me to fallow the spot not ploughed before. It broke in fine tilth, and was apparently as well prepared as that twice ploughed. From its vicinity to the barn it was perhaps more fertile than the adjoining lands. The crop was much better on the early fallow than on the late, and the growth of weeds after harvest much more luxuriant.

On repeated observations since, on clover, as well as on common grass fallows, I have observed that land ploughed in July and the early part of August, changed many shades darker after ploughing, than land adjoining fallowed in September and October, which if it ever changed at all, the change was imperceptible. I have observed the crop to be greater, to ripen earlier, less liable to accidents from rust, &c.—The growth of weeds after it to be more luxuriant, and the land having the appearance of an increased fertility, succeeding early fallows in comparison with late, the preparation in all things being the same. What could have changed the colour of the clay turned by the early fallows, previous to being mixed with the soil by a second ploughing? It was not in contact with the vegetable matter turned by the plough. The observations were made where it had been covered many inches. The sun alone could have produced no such effect. I supposed the change to be produced from the quantity of gas generated in the decomposition of vegetable matter turned under, which rising through the clay, had impregnated the whole mass of it, and had fertilized it to the surface. That in July and August the days being long and hot, the nights warm, vegetation tender and succulent, the decomposition was rapid, and the quantity of this fertilizing gas very great On the contrary, in September and October, the days being much shorter, the nights longer and cool, vegetation hard and woody, and all circumstances unfavourable for a rapid decomposition, the air was disengaged in smaller quantities, and gradually wasted without producing a perceptible effect. From these observations I have been induced to adopt the following opinions.

1st. That the fertilizing properties of manure exist more in the gas that is generated in its decomposition, than in the body, or quantum of the manure itself.

2d. That half rotted manures are more active in their effects than those completely rotted.

And 3d. That manure *rises* by means of this air generated from it, and does not *sink* as has been supposed. Respectfully yours,

TH: J. RANDOLPH.

To Peter Minor, Esq.
Sec'y Agricultural Society, of Albemarle.

FROM THE "CHAMPION"—LONDON.

RENT OF LAND.

Rent of Land is the difference or the value of the difference of the produce *per* acre of the worst land in cultivation, and of the better quality; when the same amount of capital has been expended, and the same quantity of labour has been bestowed upon each, in the same space of time.

But in order to shorten the present essay, as well as for the more easy explanation of the nature of rent, the subject has been divided into two parts, designated by the titles—1. Real Rent. 2. Artificial Rent.

If there were no restrictive laws, lands of a certain quality only would be cultivated, and the difference in the value of their produce per acre, as mentioned in the first paragraph, would be what is here called REAL RENT.

But in England, laws forbidding the importation of corn have raised its price, and forced worse and worse land into cultivation, and have also greatly increased the difference in the value of the produce between the worst land thus forced into culture, and lands of better quality; and as the whole difference is taken as *rent*, the farmer has to pay a higher *rent* on all but the worst sort of land than he would pay but for the restrictive laws: *this higher rent*, as being caused by the law, is called ARTIFICIAL RENT.

REAL RENT.

1. Is the fair equivalent to the landlord for the use of the land.

2. It would not be raised, and it would not be lowered, at the option of the parties concerned.

3. Its amount is regulated by circumstances beyond their control. These circumstances are denominated *principles*.

4. It makes no part of the price of corn.

ARTIFICIAL RENT.

1. Is a tax upon the consumer, levied upon the food he eats. Its amount is equal to the difference to which restrictive laws raise the price of corn, and the price at which it would be sold, were the trade in corn wholly free.

2. Corn is therefore, as effectually taxed by means of restrictive laws, as it would be were a stamp affixed to every loaf of bread, as it is to a quack medicine.*

3. Laws which forbid the importation of corn, under a certain price, into a country *where the population is increasing*, tend continually to increase the amount of rent paid *per* acre, and beget the necessity for other laws, raising the price still higher, and, ultimately, the total exclusion of foreign corn.

4. These laws do not, in the long run, benefit the farmer, on the contrary, they tend towards his ruin.

The reasonings in this essay, although equally applicable to other kinds of farm produce, will be restricted to that of corn only, this being all that is requisite for elucidation.

For the purpose, too, of greater convenience in explaining the nature of what is here called REAL RENT, we will suppose a community to be placed upon an extensive portion of land of different degrees of fertility, but hitherto uncultivated. That this community consists of persons, who, by means of their capital and industry, are capable of supplying themselves with food, and most of the comforts and even elegancies of civilized life. Some are handicrafts, and some are farmers. Now, if this community were, as they must necessarily do to establish a government—and if they were to vest the whole of the land in the government, to be sold for the purpose of producing a revenue to the state, it would be in precisely the same situation as some of the newly settled states in the North American Republic are actually in. Those of the community who are mechanics and traders would build towns, where, whatever was necessary for supplying the wants of the community, either for use among its members, or for exportation, would be manufactured; while those who were farmers would erect farm buildings, and proceed to cultivate the land. In this state of society (and it will be seen to hold good in every other state of society) *there could be* BUT ONE RATE OF PROFIT, on all ordinary employments of capital and labour, for if any one branch of industry were found to be more profitable than another, some of those who followed the less profitable branch would, in coure of time, leave it, and embark their capital in the more profitable branch. This has always been, and must continue to be, the course pursued; the most profitable concerns inducing people to embark in them, the less profitable always inducing people to quit them. But any one branch of industry can only be more profitable than other branches, while the produce of that particular branch is insufficient to supply the demand, and consequently to raise the price of the article produced above its proper level. So, on the contrary, one branch of industry can only be less profitable than others, while the produce of that particular branch is more than sufficient to supply the demand, and consequently, to depress the price of the article produced below its proper level. In the first case, the price will rise in consequence of the scarcity; in the last case, it will fall in consequence of the glut. But as capital leaves that branch which produces the level profit, it goes to that which produces the most profit, the quantity of the articles produced will be lessened in the one branch and increased in the other branch; and so will the price of those articles be reduced in the one branch, and increased in the other, and so will the profit be increased in the one and reduced in the other; and thus the profit of every branch of industry will be equalized.† It follows then, that *there can be but one rate of* PROFIT on all the ordinary employments of capital and labour.

To this rate of profit the cultivator of land must conform. His rate of profit will be the same as that of the manufacturer, one law necessarily governing the whole and equalizing the profit of all.

In the case of the supposed community, it is clear that none but lands of the first rate quality would be cultivated; the widest choice possible would exist, and the farmer would of course choose the best land, and from the cultivation of this land he would obtain the common rate of profit, and no more, and for this rate of profit he would be willing to continue to cultivate the soil, since it would be impossible for him to turn his capital to better account by employing it in trade, manufacture, or commerce.

So long as corn enough for the consumption of the community, could be raised from land of the first quality, the farmer must continue to cultivate the land himself. He would not let it, since no one would pay rent for it. Let it, however, be *supposed*, that some one could be found to take it at an annual rent, the consequence would be, that as the produce of the land yielded only the usual profit of trade, whatever he paid he must pay out of the profit, and consequently his profit would be reduced below the ordinary rate of profit by the whole amount he paid in rent, and he would thus voluntarily and unnecessarily have consented to make his capital the least productive of any in the community. The supposition is therefore absurd. So long as land of the first rate quality, and in eligible situations, remained uncultivated, there would always be people willing to bring it into culture for the ordinary rate of profit, as fast as the increase of the population required it. *No rent could therefore be paid.*

This may be called the First Stage.

The Second Stage may be said to commence when all the land of first rate quality had been brought into cultivation, but when, from the continued increase of the people, the whole of its produce was not sufficient fully to satisfy the demand: recourse must then be had to land of a worse or *second quality*.

Let us inquire how this is brought about. When, in consequence of an increase of people, all the corn produced from land of the first rate quality has been consumed, without fully satisfying the demand, scarcity will ensue and the price of corn, following the general law, will rise But as the expense of capital and labour on the best land will still remain as it was, the profits of the farmer will increase as the price rises, and will be raised *temporarily* above the rate of profit on the ordinary employment of capital; and as all the land of first rate quality has been brought into culture, no means exist by which the price can be lowered; and the increased profit will belong to the farmer, as long as he continues to be the owner, as well as the cultivator of land.‡

It has been stated, that, in the first stage, none but land of the first rate quality would be cultivated, and the cause is obvious. If from an acre of land of the first rate quality twenty-five bushels could be produced, and if from an acre producing twenty-five bushels, nothing beyond the common rate of profit could be obtained, it follows, that if the same amount of capital, and the same quantity of labour would only produce twenty-five bushels from land of the second rate quality, there would be a loss in cultivating it of five bushels per acre—a diminution from the common rate of profit, and hence an effectual bar to the cultivation of land of the second quality. And this bar would continue not only while any land of the first quality remained uncultivated, but until the increased demand had raised the price of all the corn produced on the best land, as high as to afford the common rate of profit, on land of the second rate quality, from which twenty bushels only were produced by the same amount of capital, and the same quantity of labour, as produced twenty-five bushels from land of the first rate quality.

When, however, the price has been raised so as to enable the possessor of land of the second quality to obtain the common rate of profit from cultivating his land, he would begin to cultivate it. This would not, however, reduce the price of corn, since no more land of the second quality could be kept permanently in cultivation, than was just sufficient to supply the increased demand. It would be possible, however, in this stage, as it had previously been in the preceding stage, to produce more corn than could be consumed: but as this, unless it could be exported with the common rate of profit, would reduce the rate of profit to the grower below the common rate of profit, no more would be grown than was absolutely necessary to supply the demand.

When, by the increase of the population, the demand for corn had increased, and the price had been raised so as to enable those who held land of the second quality to obtain the common rate of profit from its cultivation, the whole of the difference of the produce between land of the first and land of the second rate qualities, might and soon would be taken as rent. Thus we see how rent originates. In the case supposed, the difference between the produce of the two sorts of land being five bushels; five bushels, or an equivalent in money, would be the amount of the rent of the first rate quality of land, while land of the second rate quality would pay no rent at all, but would be cultivated by the proprietor during the second stage, as land of first rate quality was cultivated by the proprietor during the first stage.

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* *In the case of a tax, the money goes to the Exchequer. In the case of the corn laws it goes at once into the pockets of the landowners. The whole community being injured for their advantage solely.*

† *It is not pretended that it would be mathematically exact—but that there will be a continual approximation.*

‡ *It may be presumed, that there could be no importation of corn until after all the land of first rate quality was in tillage.*

The THIRD STAGE would commence when all the land of second rate quality had been cultivated, and population continuing to increase, scarcity had been again produced, and the price of corn had been so increased as to make it profitable for those who held lands of the third rate quality, from which only fifteen bushels per acre could be produced, to cultivate their land, when the steps described in respect to land of second rate quality would be again taken.

If, from land of the first rate quality, 25 bushels could be produced, 20 bushels from land of the second rate quality, and 15 bushels from land of the third rate quality, all the difference would be taken as rent, and land of the first quality would pay 10 bushels, and land of the second quality 5 bushels, to the landlord, while land of the third quality *must* be cultivated by the owner for the common profit of trade.

Thus it is apparent, that *rent is produced by an increase of the population producing scarcity*, and consequently a *permanent* rise in the price of corn, so as to enable the holders of worse land to obtain the common rate of profit from their cultivation—*the most fertile land paying the most rent, the least fertile land paying no rent at all;* and thus equalizing the profit of all.

Real rent, where there are no restrictive laws, is the value of the difference of the produce per acre of the worst land in cultivation, and of land of better quality, when the same amount of capital and the same quantity of labour have been expended on each in the same space of time which was to be proved. Real rent makes no part of the price of corn. This might be inferred from what has already been stated, but it may be adviseable to make this important circumstance as clear as possible.

It cannot be supposed, that when land of different qualities was cultivated, the holders of the better qualities for which rent could be obtained, would, for any considerable period, continue to cultivate those lands themselves. The love of ease and distinction would induce them to let the land to others, and to live themselves without toil, upon the rent. But whether they let the land to others, or cultivated it themselves, the price per bushel of all the corn produced would be regulated by the price at which it could be sold by those who cultivated the worst land, allowing them to retain the common rate of profit. If it failed to do this, they would cease to cultivate it. Thus, there could be but one price for all the corn produced, and that price would still be paid, whether the land of better quality were let to others, or cultivated by the proprietors themselves. *Real rent*, therefore, makes no part of the price of corn; which was to be proved.

Real rent is regulated as to its amount by causes beyond the control of the landlord and tenant. It has been shown, that if the best land produced 25 bushels, the next best 20, and the worst only 15, that 5 bushels would be the amount of rent on the one, and 10 on the other; but if the landlord were to demand 6 bushels, instead of 5 on the one, and 12 bushels instead of 10 upon the other, his demand would not probably be complied with; but if, from the inconvenience of removal or any other cause, the farmer was to comply with the demand of his landlord, his profit would be reduced far below the ordinary rate: and, as capital, according to the general rule, leaves the less profitable occupations, and goes to the more profitable; so, in this case, it would in time be drawn from the cultivation of the land thus overburdened with rent, and this would compel the landlord to take his fair equivalent, the difference of the produce of his land above the worst in cultivation, and *no more.* It is unnecessary to prove, that the tenant would not, for any considerable space of time, be allowed to hold the land for less than its value. Thus, it is proved, that *real rent* is regulated as to its amount, by causes not under the control of landlords and tenants.

From the Lancaster Gazette, (England,) November 30, 1816.

ON THE FLOUR FROM WHEAT CORN THAT HAS GERMINATED.

MR. EDITOR,

Having baked some new flour *which took twice the usual time*, and it being, when done, a hard thick crust, elevated like a roof over a glutinous saccharine paste, the specific gravity of which was greater than water, and the increase of weight only one-fourth, 24 lbs. flour producing only 30 lbs. of bread, wheras of good flour, on an average of four batches; 104 lbs. flour has produced 139 lbs. 8 oz. of bread, being an *increase* of about *one third*. I began to enquire if no means could be found to remedy this great and alarming evil; I was soon informed that Natron, the Subcarbonate of Soda of the modern nomenclature, had been recommended. As I knew the Subcarbonate of Soda to be an excellent corrector of the acid that is very commonly prevalent in the human stomach, and that it would act beneficially, and was in no case unwholesome in the proportions and manner intended to be used; I lost no time in forwarding the following experiments:

1st—Take New Flour, two pounds;
Subcarbonate of Soda, two drachms.
2d—Take new Flour, two pounds;
Subcarbonate of Soda, one drachm.
3d—Take New Flour, three pounds;
Old do. one pound;
Subcarbonate of Soda, two drachms.
4th—Take New Flour, three pounds;
Old do. one pound;
Ground Rice, half a pound;
Subcarbonate of Soda, two drachms.
5th—Take New Flour, two pounds;
Old do. one pound and half;
Subcarbonate of Soda, one drachm.

The Subcarbonate of Soda was dissolved in the water in which the flour was to be mixed, and the Yeast added in the usual way.

RESULTS.

Nos. 1 and 2, were pleasant tasted bread, similar to brown bread; it was *friable*, very buoyant in water, and filled like a sponge; it gained nearly *one third*, but No. 2 was better bread than No. 1; and this is well worth attending to, since it proves that with this flour half the quantity of Soda produced the best effect, a circumstance that is of importance in an economical point of view.

No. 3. was better bread than Nos. 1 and 2, and and it was but little inferior to the bread procured from our old flour, when the Alkali was not used.

No. 4. was heavier than the preceding, but was baked in a tin pan.

N. 5. was also baked in a tin; it was as good bread as that made wholly with the old flour; but it was not very easy to distinguish Nos. 3, 4, and 5, from each other.

From these experiments it appears that by thirty grains of Natron, a pound of the new flour, *which as loaf bread would not otherwise be eatable*, will make about a pound and an half of very pleasant tasted wholesome loaf bread; having then, Mr. Editor, come to this result, I think it my duty, and it is my apology for obtruding this on your notice to intreat the serious attention of the heads of families to this very important subject, and if by my humble means, a portion of human misery, however small, should be alleviated, it will be a source of pleasing reflection, and a rich recompence to

Sir, your most obedient,
Humble servant,
P. S. K.

P. S.—On eating No. 3, as bread and butter for breakfast, it was found to be very *superior* in taste to the bread made wholly of old flour.

GROWTH OF FRUIT TREES.

FROM THE NORWICH (CONNECTICUT,) COURIER.

I observed an article in your paper a short time since relative to the white-washing of fruit trees, and have witnessed with pleasure the attention paid to it. There are some other attentions which I am convinced by actual experiment, (in addition to white-washing,) will facilitate the growth of fruit trees considerably. In the spring of the year, at, or before the time in which the trees open their buds, (although later will answer,) scrape away with a hoe all the grass or vegetable rubbish for one or two feet from the trunk of the tree, at the root in such a manner as to open the soil to receive the benefit of the dews and rains. If the old earth be barren, scrape out the top and put in manure of any kind; should there be ashes or lime among it, so much the better, as it will effectually kill the slugs and worms which infest the roots of most kinds of fruit, particularly the peach, plum, apricot, nectarine, &c. (and which is one great cause of their untimely decay.) Soapsuds and all wash from the house are very excellent to pour around the roots of the fruit trees, if the grass be dug away so that the wash have a free passage. Many persons will see the utility of this method of treatment, by examining trees that stand in a situation to receive the wash of the house. As an example of the efficacy of such treatment, I give you a statement of a few plum trees, now in my possession; these trees come up near two other plum trees, on a piece of ground with a North Easterly aspect, where soap suds and other water had been in the habit of being poured—they are not sprouts but came from the stone.

1 tree 1 year old, 6 feet in height,
1 do. 1 do. 8 do. 2 inches do.
1 do. 2 do. green 6 do. 6 do. last year,
1 do. 2 do. do. 7 do. 3 do. do.
1 do. 2 do. do. 7 do. 6 do. do. do.
1 do. 2 do. do. 9 do. 2 do. and 14

inches in diameter, at 4 inches from the ground. The four last mentioned trees are now in blossom, May 3d.

Many have told of the rapid growth of fruit trees in Ohio and other parts of the Western Country, but I have never seen any thing to excel this last mentioned tree, there, during a residence of several years, and which plainly shews that with proper attention, fruit will grow as well here as in any country.

My other trees that I have poured suds around, have grown remarkably, but not in so extravagant a manner as the plums. I am sensible that, were trees treated in the manner above described, they would come to maturity much sooner, be more fruitful, and last much longer than if left to themselves, because those so left, no sooner begin to thrive, than worms, flies and other insects infest them to such a degree (the turf and grass sheltering them securely) that in a short time they become sickly, and soon after decay; which inspire many with a belief that trees will not flourish in this country, and much is laid to the climate and bad seasons, when the fault principally lies in the cultivator.

Should this method be attended to as effectually as I believe the white-washing to have been.—I am persuaded that, in a very few years fruit will be as plentiful in this vicinity as in any other.—The labour is but trifling, and if persons only try a few by way of experiment, I believe they will be convinced of the utility of it.

There is another thing which ought to be attended to in the pruning of trees, that facilitates the healing of the wounds caused by the operation, viz. a plaster made of common sand, fresh cattle manure and slacked lime, of equal parts, wet and mixed to the consistency of common mortar and applied to the wound, as soon as made; it may be put on from a quarter to half an inch thick with a trowel or shingle—this totally obstructs the air from the wound, and is a promoter of the growth of the new bark.

AGRICOLA.

ON PLOUGHING DOWN TURNIPS FOR MANURE.

To the Editor of the Glasgow Chronicle.

Sir,—It may be thought presumptive in me to write upon agriculture, when so much has been said and written upon that subject already, by persons whose ability is much greater than what I can pretend to. The subject, however, is extensive; and it may be shortly remarked, that writers upon agriculture in general dwell more upon theory than upon practice. Theory indeed is good in its place; but surely the practical part is to be preferred, by recommending nothing but what is simple, easily understood, and capable of being reduced into practice by the plainest farmer. A person may be a very good farmer, though he may not have such knowledge as to give a philosophical account of the growth of plants. Indeed philosophical pretenders are often the worst farmers. Without further preamble, therefore, I shall proceed as shortly as possible to detail some experiments, which I lately tried on a farm occupied by me, in the Upper Ward of Lanarkshire. The thing, I believe, has not been tried before, at least to my knowledge. I am certain, however, it never has in this part of the country.

In the year 1806, I had prepared, in the usual way, a large field for potatoes and turnips, dunged well in ridges, and planted and sown. Finding that I had not a sufficient quantity of farm dung to finish the whole field, it occurred to me in the end of July of that year, that I would, by way of experiment, top-dress the remainder of it with hot lime, and sow broad-cast with the white turnip seed tolerably thick. This having been done, immediately after it was rolled in. My reason for preferring this species of seed, was, that it was the cheapest, and produced the largest shaw.—The turnip came away exceedingly well; and became pretty luxuriant; but, before they neeped, availing myself of dry weather, I ploughed them down in autumn. This ploughing answered for the seed furrow; and before the winter set in, I water-furrowed the land, and cleared the end of the ridges with a spade to prevent stagnation. Part of what was potato and turnip, was also ploughed before winter: the remainder early in the spring; and water-furrowed in the same way. At seed time both parts of the field were again top-dressed with hot-lime, sown with potato-oats, rye-grass, and clover seeds; and to my great satisfaction, the ground that was top-dressed with hot-lime, and sown with cast turnip, and ploughed down without dung, was found in harvest to afford a superior crop to that which was well dunged in the potato and turnip; and even the following year the land first-mentioned yielded a better crop of clover and rye-grass. Being successful in this instance, I have repeatedly tried the same experiment since, and always with equal success. The advantages resulting from this mode of farming are obvious. Where dung is high priced, it proves that ploughing down turnip in fallow-land, top-dressed with hot-lime, will answer the end better than even though dung had been employed.

Encouraged by this successful experiment, though resident in a high district of country, I last summer fallowed a field for the cultivation of wheat, upon nearly the same principles. I gave it three furrows, and in the end of July, without top-dressing with lime, sowed it broad-cast with turnip seed, at the rate of 6s. 3d. per acre, rolling it in as before. In September, and when the turnips grew thick and luxuriant, but before they had neeped, I gave the field a half-dunging upon the turnip shaws and ploughed the whole down. I may here observe, that when the shaws are so strong as to gorge the plough, they ought to be cut down with the scythe and spread upon the field before the dung is laid upon it; the advantage of this is, that both the root and shaw are completely covered with the soil, which prevents a new vegetation taking place among the young wheat. After the turnips had been thus ploughed down I top-dressed the field with lime, and immediately thereafter, availing myself of a dry time, I sowed the field with wheat at the rate of fourteen pecks per acre: to my great satisfaction, as well as to the astonishment of all my neighbours, the field of wheat thus prepared is at this moment equal to the best of the Lothians. The soil upon which these experiments have been tried is somewhat loamy, though I doubt not but that they would succeed equally upon a lighter soil, and indeed, where luxuriant turnip shaws can be raised, joined with lime, either with or without top-dressing, as the state of the land may require. It is thus, in short, proved, that a farmer may raise good crops of corn and hay, by following the mode suggested, without any dunging at all; and with a half dung at 6s. 3d. as the price of eight pounds of white turnip seed, he may raise wheat of a superior quality. It must be remarked, however, that the great point in summer fallowing is to plough and harrow when the field is thoroughly dry; and in no instance to plough wet when it can be avoided, a circumstance which was particularly attended to on the occasion above mentioned. In these instances also, the field was prepared by getting the first furrow before winter, which, if the farmer can accomplish it, is of great importance in this, as well as in every case. Fallowing, it is well known, prepares the ground both for lime and dung co operating immediately.

No scheme is ever proposed, which does not meet with opposition: the soil and situation, and other circumstances may be here stated; but my opinion is, that whenever luxuriant turnip shaws can be raised, my plan will be found to succeed. I only wish it may have a fair trial. With regard to the time when this or any other process in farming ought to be gone about, much, of course, will depend upon the season. I have remarked, for instance, that in some early and in others late sowing is most advantageous. Even in this way a sluggard who neglects to sow, till in the usual case it is beyond the proper season, may have better crops than his more industrious neighbour who sows early. I repeat, however, that for proving the truth of my plan, nothing else is required than a trial.

I am, Sir,
Your most obedient servant.
An Upper Ward Farmer.

5th August, 1815.

From the National Advocate.

HYDROPHOBIA.

Mr. Middleton, our Minister at Russia, has transmitted a memoir on Hydrophobia to Dr. Mitchell, written by Dr. Marochetti, a Russian physician, and given at length in the *Commercial Advertiser*, by which the indications of this terrible disease are pointed out, and the cure made known. He states, that the appearance of tumors of unequal size appearing under the tongue, always and uniformly mark the existence of hydrophobic virus, which can be easily ascertained by the touch. When any one is bitten by a dog, it is recommended that he should subject his tongue to examination for six weeks, and if no tumors then appear, it may safely be concluded that no poison has been communicated by the bite. But if during any part of this period, tumors should show themselves, the Doctor recommends that they should be instantly cauterised, or opened by a sharp lancet. A greenish matter will proceed from these incisions, which the patient is directed to spit out, and then wash his month with a strong decoction of the tops and flowers of the *Genista Lateo tinctoria*, (yellow broom.) The virus is thus destroyed in its germ; and details of numerous cases are given where this treatment has been attended with the happiest results.

On this interesting subject there is the following notice in the *Gazette de Sante* (Gazette of health) a medical journal published in Paris, by which it appears that the important discovery referred to in the memorial of Dr. Marochetti, was made as far back as 1813. The subject is highly deserving the attention of the medical profession in this country.

" Mr. Marochetti, Surgeon at the Hospital at Moscow, being in the Ukraine, in 1813, was requested to give assistance to fifteen persons who had received the bite of a mad dog. A deputation of aged men waited upon him, and intreated he would administer help to the unfortunate persons, through a peasant, who during several years had acquired great reputation for curing hydrophobia. Mr. Marochetti consented upon certain conditions. The country Doctor then administered to fourteen of the persons confided to him in a peculiar way. The fifteenth, a young girl of sixteen, was treated in the ordinary manner, for the purpose of proving the effect of both modes of treatment. To each of the fourteen he gave daily one pound and an half of the decoction of the buds of *yellow broom flowers*, and he examined twice a day under the tongue, the place where according to his statement, little swellings are formed, containing the *virus* of madness.—These swellings rose the third or ninth day, and were seen by Mr. Marochetti.—Very soon after they appeared, they were touched by a sharp red hot needle, after which the patient gargled the part with the decoction of broom. The result of this treatment was, that the fourteen patients were cured in six weeks, whilst the young girl, treated differently, died on the seventh day in convulsions of madness. Three years after, Mr. Marochetti paid a visit to the fourteen persons and they were all doing well. The same physician being at Padolla in 1818, had a new opportunity of confirming this interesting discovery.—The happy result of this mode of treatment was the same with reference to 26 persons, who had been all bitten by a mad dog."

FROM A NEW YORK PAPER.

I send for insertion, the following tables of English words derived from other languages, which was formed some years ago upon careful examination of Johnson's folio Dictionary.

SCIENS.

Table of English words derived from other languages.

Latin	6732	Irish*	6
French	4812	Runic	4
Saxon	1565	Flemish	4
Greek	1148	Erse	4
Dutch	691	Syriac	3
Italian	211	Scottish	3
German	106	Irish and Erse	2
Welch	59	Turkish	1
Danish	75	Irish and Scotch	1
Spanish	56	Portuguese	1
Islandic	50	Persian	1
Swedish	34	Frisic	1
Gothic	31	Persic	1
Hebrew	16	Uncertain	1
Teutonic	15		
Arabic	13	Total,	15,784

The incongruity which I find in this enumeration of dirivative words, is the misapprehension of the author of the dictionary or the compiler of this little table—thus he makes

The Saxon, German, and Teutonic, to be all different languages;

The Flemish and Dutch;

The Swedish, Gothic, and Teutonic;

The Irish, Erse, Scottish, Irish and Scotch;

The Persic and Persian.

Some of these as they are here classed are really the same language. The Persic and Persian are no otherwise different than the usual provincialisms of every country; there is some difference between the modern German language of learned men, and the vernacular tongue; and that spoken in Saxony is considered more pure than in Swabia, or Bavaria; but it is still the same language: the same is true of the Irish and Erse, which is in every respect the same language, the only difference existing in the use of different synonyms in phraseology, instead of the same exact expressions on ordinary occasions; a circumstance common to the provincial dialects in every living language, and much distinguished in the Italian, which is considered to be spoken in greater or less purity in different parts of the same country.

NOCENS.

* * *

TABLE OF CALCULATIONS,

Shewing the rate at which Cottons may be purchased in America, in order to be landed in Liverpool at a certain price; the principle on which they are made being founded upon actual results. It has been ascertained from experience in trade, that the charges on purchasing and shipping Cottons in America, generally amount to 12½ per cent on *Sea Islands and Uplands*, and 15½ per cent on *Orleans*.

Charleston Courier.

EXAMPLES.

Sea Islands and Uplands cost 12½ cents.
Add, loss in wt. 3 per cent.
Petty charges,
insurance and
interest, 4½
Commissions, 5

12½-equal to 1 9-16ths.

Making, 14 1.16th cents.
Equal to 7 9-16th *pence.*
Freight, 1
Duty, 6 per ct. 0 8-16ths.

Total, 9 1-16th pence cost in Liverpool.

The calculation on *Orleans* is the same except the allowance for loss in weight, which is 6 per cent.

SEA ISLANDS AND UPLANDS.

America. Cents.	*Liverpool.* Pence.	*America.* Cents.	*Liverpool* Pence.
8	6 2.16	24¼	16 1.2
8¼	6 1.4	24½	16 3.4
8½	6 7.16	24¾	16 7.8
8¾	6 10.16	25	17
9	6 13.16	25¼	17 1.8
9¼	6 15.16	25½	17 1.4
9½	7 2.16	25¾	17 5.8
9¾	7 1.4	26	17 3.4
10	7 7.16	26¼	17 7.8
10¼	7 9.16	26½	18
10½	7 13.16	26¾	18 1.8
10¾	7 15.16	27	18 1.4
11	8 1.16	27¼	18 1.2
11¼	8 1.4	27½	18 5.8
11½	8 6.16	27¾	18 7.8
11¾	8 1.2	28	19
12	8 11.16	28¼	19 1.8
12¼	8 14.16	28½	19 1.4
12½	9 1.16	28¾	19 3.8
12¾	9 3.16	29	19 5.8
13	9 6.16	29¼	19 7.8
13¼	9 1.2	29½	20
13½	9 11.16	29¾	20 1.8
13¾	9 13.16	30	20 1.4
14	10 1.16	30¼	20 3.8
14¼	10 3.16	30½	20 5.8
14½	10 5.16	30¾	20 3.4
14¾	10 1.2	31	20 7.8
15	10 9.16	31¼	21
15¼	10 3.4	31½	21 1.4
15½	10 15.16	31¾	21 3.8
15¾	11 2.16	32	21 1.2
16	11 5.16	32¼	21 5.8
16¼	11 7.16	32½	21 3.4
16½	11 10.16	32¾	22 1.8
16¾	11 3.4	33	22 1.4
17	11 15.16	33¼	22 3.8
17¼	12 2.16	33½	22 1.2
17½	12 5.16	33¾	22 3.4
17¾	12 7.16	34	22 7.8
18	12 9.16	34¼	23
18¼	12 3.4	34½	23 1.8
18½	12 14.16	34¾	23 1.4
18¾	13	35	23 1.2
19	13 1.4	35¼	23 5.8
19¼	13 6.16	35½	23 3.4
19½	13 9.16	35¾	23 7.8
19¾	13 11.16	36	24
20	13 14.16	36¼	24 3.8
20¼	14	36½	24 1.2
20½	14 1.4	36¾	24 5.8
20¾	14 3.8	37	24 3.4
21	14 1.2	37¼	25
21¼	14 5.8	37½	25 1.8
21½	14 3.4	37¾	25 1.4
21¾	14 7.8	38	25 3.8
22	15 1.8	38¼	25 1.2
22¼	15 1.4	38½	25 3.4
22½	15 1.2	38¾	25 7.8
22¾	15 8.8	39	26
23	15 3.4	39¼	26 1.8
23¼	15 7.8	39½	26 1.4
23½	16 1.8	39¾	26 5.8
23¾	16 1.4	40	26 3.4
24	16 3.8		

* * *

FROM THE NEW YORK COMMERCIAL ADVERTISER.

BUTTER.

This being the day, on which it had been determined by the Agricultural Society, that premiums should be adjudged to those persons, who should bring the best butter in quantities not less than 16 lbs. from one dairy, either to the Fulton or Washington market—the candidates, as might have been expected, were very numerous, at an early hour. Many of them were entitled to great commendation for the excellence of the quality of this very important necessary of life, as well as for the neat manner in which their respective specimens had been made up.—Where so many justly deserved credit, it was difficult to decide to whom the premiums should be given. After due consideration, however, the inspectors adjudged them to the following persons:

FULTON MARKET.

Mrs. Commodore Morris, Morrisenea, 1st Premium, a silver pitcher,	$15
Mrs. Edward Leveridge, Newton, L. I. 2d Premium, a silver milk pitcher,	10
Mrs. Ray, Westchester, 3d premium a silver cup,	5

WASHINGTON MARKET.

Mr. Cornelius Terhune, Hackensack, 1st Premium, a silver pitcher,	15
Mr. Josiah Austin, Seconicus, 2d Premium, a silver milk pitcher,	10
Mr. Thomas Brown, West-Chester, 3d Premium, a silver cup,	5

* * *

TO THE EDITOR OF THE AMERICAN FARMER.

SKIM COULTER PLOUGH.

Oxford, Philadelphia Co. Penn.
May 24, 1822.

Mr. Editor,

Sir—In your paper of the 17th you request information respecting the skim coulter used in England. The skim is a blade of iron attached to the common coulter, and standing at right angles with the broad side, a little below the surface of the ground when the plough is at work; or just so much as to pare off about 1½ inches of the top of the ground before the share moves it. Its length should be about nine or ten inches or the breadth of the furrow slice. It is narrow and is almost brought to a point at the farthest end, but is made wider as it joins the coulter, and should be turned up into a curved wing, in order to turn over or shove into the furrow, every thing that it cuts up, which is covered over by the earth raised by the share. It is most in use in the counties of Kent, Surrey, Essex, Herts, and all those surrounding the metropolis. Its advantage is that it cuts up before the share, all grass, clover roots, weeds and rubbish, and turns them into the bottoms of the furrow, where they are more completely buried than if the furrow had been turned over at one slice. The grass is never seen afterwards to grow betwixt the seams of the furrows; and having the grass roots cut and separated from the earth before the furrow is turned, the harrowing is much easier, and the grain gets better covered. The skim coulter requires steady ploughmen and a slow motion of the plough, and does best with oxen. It answers best with wheel ploughs, which may be regulated to plough a certain depth, without depending so much on the skill of the holder; and this may be the reason why it has not travelled out of the southern counties, where the old fashioned wheel plough, drawn by four or five horses, universally prevails, into the northern and eastern where the light swing plough with two horses is in use. I have seen the skim tried upon swing ploughs and given up; for these depending more upon the carefulness of the holder, a little variation in the depth of ploughing will throw the skim out of work; and I am doubtful whether an American ploughman would make them answer at all, driving their horses as they usually do at the rate of 3½ or 4 miles an hour, and turning over a furrow of 12 inches. It appears to me that it would answer well in this country for ploughing old seed land for corn in the spring, when there is often a good deal of rubbish on the surface; and also for putting down any kind of stubble in the fall. It answers well for ploughing in long manure, as it shoves it into the bottom of the furrow before the earth raised by the share falls upon it, by which it is covered more completely than when ploughed under in the ordinary way. The skim coulter would not answer with shallow ploughing, nor with a broad furrow slice, such as is generally the work of American ploughmen. In Kent, where it is done in the completest manner by the old turn wrest plough, which has a shifting mouldboard, and turns the furrows all one way, the furrow is seldom more than 8 inches wide, and from 6 to 8 deep, by which the grass and weeds are buried too deep to vegetate again and grow as they often do through a thin furrow.

ENGLISH PROSPERITY.

I observe in your note on a passage of your correspondent Mr. *Valck's* letter, No. 8, page 62. you express some surprise at his talking of English prosperity, and ask in what it consists? This may well be a perplexing question to persons on this side of thewater, for it has been puzzling enough to people at home, amongst whom it remains still problematical whether the nation be in an advancing, stationary, or declining state. But though Mr. V. has discovered the secret of this prosperity, yet as to what it consists of—as to what are its effects—whether it is a general national prosperity, or only enjoyed by some particular favoured class or classes of people, we are altogether left to conjecture. The secret, or the secret cause of the prosperity of England according to Mr. V. lies in her being able to export "*not only her raw materials, but also all her bread stuffs in the shape of manufactured goods*" by means of her "*numerous manufacturing population*," which enables her to consume "*all the grain her soil produces, and every head of cattle it feeds.*" You ask "if this prosperity is enjoyed by the mass of the people employed in any of the branches of trade, art, or industry?" No; certainly not by the *mass.* For with those who are unacquainted with the condition of the working manufacturers of England, it is difficult to conceive that there can be a people in any country under heaven, whose labours are so incessant, and conducted with such dexterity and skill, who are so sparingly compensated as they are;—or who suffer so many privations, and exhibit such a spectacle of squalid wretchedness. The prosperity then, does not conist in the comfort and happiness enjoyed by the mass of working artizans and manufacturing people. We may enquire next whether the farmers and agriculturists enjoy any of this prosperity, in consequence of the manufacturers eating up all their grain and beef? The thousands of petitions filled with the numerous complaints of this class of people, with which the tables of both houses of the legislature have been loaded for several years back, and which have been annually increasing, will answer this question. Then the class of landholders? They indeed have enjoyed their share of prosperity, but the fate of the tenants and cultivators of their property will be theirs next; and even now it is fast overtaking them. For unoccupied farms produce no rent, and cultivate them, themselves they cannot; for with their lands many of them already heavily mortgaged, they have neither money to stock them, nor skill to raise more produce than will repay the expenses of their cultivation. There remains but another class or two; the master manufacturer, the great capitalists, the fundholders, and the merchants. Excepting perhaps the latter, all these are the people upon whom this prosperity has poured with a full moon tide,—the prosperity derived from her numerous manufacturing population, by means of which the country is enabled to "export its bread stuffs in the shape of manufactured goods." Bread stuffs indeed this species of export must be exclusively, or potatoe stuffs, for the poor wretches have been for a long time upon short allowance, and have been under the necessity of filling their stomachs with subsistence of the very cheapest kind. A very small portion of the cattle Mr. V. talks of can have gone, in the way he mentions, out of the kingdom in any of the staple fabricks. These have found their way into more privileged stomachs, and into whatever substances they may have been distilled and amalgamated, or in which ever way they may have been exported, it has not been in the shape of woollens, muslins, hosiery or iron.

Having found out the class of persons enjoying the prosperity derived from the numerous manufacturing population, we will next see in what it consists. It consists of an enormous mass of wealth in the possession, comparatively, of but few individuals, saved from the vast profits made out of the labour of this numerous population; who by the aid of the great improvements, which mechanical skill and invention have made for the saving of labour, have been enabled to perform for their employers, three, four, and in some cases, ten times the work which they could do before these improvements were made; and from circumstances inevitably attendant upon the system, have been reduced to perform this additional work for a lower rate of compensation, or what is not sufficient to command the same quantity of subsistence, as when their labour was less beneficial to their employers. Thus all the advantages which has resulted from multiplying the productive powers of labour, by the employment of new and superior machinery, have been retained exclusively by the master manufacturers and capitalists, and not the least has been permitted to fall to the share of the operative workmen, but who on the contrary are in a worse condition than they were before these improvements began. And this is not confined to the manufacturing laborers only, but is applicable to every branch of industry in England. For the whole, or by far the greater part of that surplus of produce which has been raised by the increased skill and industry of her working people, has always been applied either to increase the numbers or augment the luxurious enjoyments of those, who, from their situation in society, are enabled to exercise a complete control over the labours of all the rest.

Thus the wealth of England which looks so dazzling at a distance, and which many others besides Mr. V. denominate prosperity, is an excess of affluence, arising from an inequitable distribution of the produce of the land and labour of the country. And notwithstanding it has enabled the state in its external relations to assume a powerful and imposing aspect, it is nevertheless an enormous evil, which grievously afflicts the country, and which in the end must produce an internal decay. It is an evil which has arose principally out of the manufacturing system, the direct tendency of which is to pauperize and enslave all the lower population, and to make hundreds poor, wretched, and dependant, for one to live in ease and affluence. But what has accelerated the progress of this evil, and done more than any thing else to increase and bring it to its height, is the paper and monied system of England; a system, the progress of which however ruinous its final tendency, it is perhaps impossible now to arrest. By the frequent and sudden changes which it has occasioned in the value of the nominal currency, thousands of industrious and reputable people of moderate fortunes have been thrown into poverty; whilst those who were already wealthy, availed themselves of the opportunity of further enriching themselves by taking advantage of the general distress. The effects thus produced joined with those which are the consequences of the manufacturing system, has so increased the inequality in the fortunes and conditions of the people, as to have changed almost entirely their social economy, and destroyed that regular gradation of ranks, by which one class of people was so closely connected with another, and which was peculiar to, and always admired in, the structure of the British society. The paper system has spread venality and selfishness over the whole land, and there is scarcely aught even the most sacred of things but what is the subject of barter and traffic. Even government itself is under the influence of an aristocracy of wealth, and its agent in corruption that rules every where.

In golden chains, the willing world she draws,
And her's the Gospel is, and her's the laws.
Mounts the tribunal, lifts her scarlet head,
And sees pale virtue punished in her stead.
Lo! at the wheels of her triumphal car,
Old England's genius rough with many a scar
Dragg'd in the dust: his arms hang idly round,
His flag inverted trails along the ground.
Our youth all liveried o'er with foreign gold,
Before her dance; behind her crawl the old.
See thronging millions to her pagod run,
And offer parent, country, wife, or son.
Hear her black trumpet o'er the land proclaim,
That not to be corrupted, is the shame.

Americans, who are anxious for the permanence of their free institutions; who prefer a sober simplicity of manners amongst their people, to great external shew and outward appearance of national wealth, should be cautious how they assist in giving a forced encouragement to large manufacturing establishments, or even to a very extended commerce, but more especially to the paper monied, and funding system of Europe. And whilst they are struck with the delusive appearance of prosperity—of evanescent prosperity, which they always produce, let them reverse the picture, and contemplate the misery and wretchedness on the other side.

I am sir,
Your obedient servant,
THOS. SMITH.

* * *

The Editor of the American Farmer, will confer a favour upon a subscriber of one of the low counties, by obtaining information on the subject of transplanting the different species of evergreens, viz. cedars, hollys, &c. he wishes to know precisely what seasons of the year, are best for transplanting them.

February, 26, 1822.

The gentleman who superintends the planting of the public square about the Capital at Washington (with whom we have not the benefit of an acquaintance) is qualified to give this information; we judge so from the invariable success which appears to have attended his tasteful operations on the grounds above mentioned.

Edit. Am. Far.

* * *

FOR THE AMERICAN FARMER.

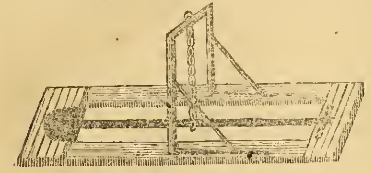
New Burn, N. Ca. March 15th, 1822

MUD SCOOP—SWEET POTATO CROP, &c.

Sir,

Good fences, enclosing a rich soil, bearing heavy crops of grain and grass, for raising, sustaining and fattening, an improved herd of domestic animals—with appropriate and substantial buildings, and implements of husbandry, constitute the pride, the glory, and the emoluments of farming.

As an auxiliary to a rich soil, the basis of all profitable farming, is herewith sent you, a description of a machine to collect mud from mill ponds, creeks, &c. with which to fertilize land. It is a cheap and a simple machine, and can be made by almost any body. Two pieces of square timber 25 or 30 feet long are laid upon the water at a parallel distance from each other of 8 or 10 feet. At each end of which a platform of plank is nailed on. At midway of this float, is erected a braced gallows, from the centre of the top piece of which, hangs a chain, or rope, holding in suspension a lever, or beam, at one end of which is attached a large iron shovel, and at the other end a cross piece to hold with the hands, to enable the labourer to work it. The machine is staked to its situation—the labourer stands on one of the platforms—takes hold of the cross piece at the end of the beam, with both his hands—raises that end—and sinks the end having the shovel to it, into the mud below; then bears down the end which he has a hold on, which raises the end with the shovel and the mud is deposited on the other platform. Thus he will proceed until a load is collected, when the machine is pushed ashore and unloaded with a shovel. The quantity of mud that may be obtained in this way—by a single labourer—in a day, will vary with circumstances. I have obtained, where the mud was about 3 feet under water, 25 and 30 single horse cart loads.



By manuring, I obtained the last season eleven barrels and four bushels corn from the same land, that without the manure produced but two barrels. The profit of farming consists in obtaining a large quantity of produce from a small quantity of of land. I also obtained 350 bushels of sweet potato slips from an acre of newly cleared unmanured land; and am now selling them for seed at 40 cents a bushel. The labour to make them consisted in forming the ridges, and in cutting and planting the vines of the potato. They are valuable food for fattening hogs, making as good pork as corn. The sweet potato, cut into thin slices, dried, parched, and ground, makes good coffee. When baked, it is an esculent, and is a treat for an epicure. In this climate, after they have been housed for two months they become a soft, sweet, rich substance, and make excellent puddings. In rich land they will grow to the size of a man's thigh. There are 6 or 8 varieties—all good. I think them far preferable as substantial food, to the famous Irish potato. They may be boiled, baked, roasted, steamed, and fried; and are a good substitute for bread, with flesh, fish, or fowl. Boiled, and then mixed with flour or meal they make excellent bread, if a plenty of good fresh butter is laid on, while hot. In fine, the lovers of good eating will find them a very desirable item in their catalogue of food.

Please to give in your paper some account of the best constructed kiln to burn rock into lime.

Respectfully, &c.

J. S. Skinner, Esq.

GEO. WILSON.

Extract of a letter to the Editor of the "American Farmer," dated Albany, (N. Y.) 31st May, 1822.

"Burden, the plough maker, has invented a flax dresser, which he thinks will be superior to Dey's or Bundy's. He intends to have one completed next week, for which the irons are now casting. It is expected to do the work superior to the others, and with more expedition, while the expense of a machine will not be over $100. As soon as I have seen it in operation, which I am invited to do in a few days, I will advise you of particulars. If I am not deceived egregiously, it is one of the greatest improvements of the day. Burden is a practical mechanic, well versed in the construction of machinery, and a man of genius. He has recently constructed cast-iron water wheels of large diameter, and ten feet buckets, which are highly extolled by those who use them: he has also made great improvements in the machinery of horse ferry boats."

TO THE EDITOR OF THE AMERICAN FARMER.

John S. Skinner, Esq.

I wish you to procure me through the medium of the American Farmer some of the seed of a tobacco once sowed in Maryland, (but which I fear is now extinct,) called long-leaved, thick jointed, bull-face.

A SUBSCRIBER.

THE FARMER.

BALTIMORE, FRIDAY, JUNE 7, 1822.

ERRATA.

Owing to an oversight when reading the proof sheet of the American Farmer of last week, the word "*thousand*" in the 14th line of the second column of the 79th page escaped notice; it ought to read thus: "from eight to ten or twelve *hundred* dollars for every foot lift."

PRICE CURRENT—CORRECTED WEEKLY.

Flour from the wagons, $6 75 to $6 87—Wharf do. cash sales $6 50—Wheat white, 145 to 147 cts.—Red, do. 140 cts.—Corn, Yellow, 73 to 74—White, 80 cts.—Rye, 65 to 70 cts.—Oats, 40 to 45 cts.—Bran per bushel, 15 to 17 cts.—Shorts, do. 20 to 22 cts.—Plaster of Paris per ton, $3 50—Shad, No. 1, $7—No. 2, $5 75 to $6—No. 1, do trimmed $8—Herrings, No. 1, $3—No. 2, do. $2 50—Whiskey 33 to 34 cents—Soal Leather per lb. 25 to 27 cts.—Skirting, do. 30 to 33 cts.—Upper whole side, $3 to 4 25—Candles mould per lb. 15 to 17 cts.—Dipped, do. 13 to 14 cts.—Spermaceti, 35 cts.—Beef fresh per lb. 8 to 12½ cts.—Pork, 6 to 9 cts.—Veal, per lb. 6 to 10 cts.—Mutton per lb. 6 to 8 cts.—Lard per lb. 12 cts.—Butter per lb. 31 to 37½ cts—Cheese per lb. 12 cts.—Eggs, per dozen, 12½ cts.—Hickory wood $4 50 to $5—Oak, do. $3 to 3 50—Pine, do $2 25 to $3.—Tar, North Carolina, $2 25—Rosin, $2 25—White pine boards per M. $10 to $30—Bees' wax, per lb. 37½ to 40 cts.—Salt, Liverpool coarse per bushel 50 to 55 cts.—Turks Island, 65 to 70—St. Ubes, per bushel, 53 to 55.

Maryland tobacco.—2 hhds. of a very superior fine bright yellow, raised in Frederick county by Gilbert and Ephraim Davis, father and son, sold for $35, being the highest price paid for any tobacco the present season. We hope the state of foreign markets may as fully compensate our enterprizing merchants as their competition has in the present case, rewarded the industry of our planters. One hogshead also raised by the same persons, sold for $25. Through the politeness of inspector Machall, we have been furnished with samples from each of the hhds. which we shall take pleasure in exhibiting to any person who may wish to see them.

Fine spangled tobacco, $16 to 18—fine red do. $12 to 16—good do. $8 to 10—Inferior, $5 to 7—Common tobacco crop, $3 to 4 50—no demand. Seconds, $1 to 6.

Virginia Tobacco—10hhds. Richmond, sold at $6 50 and $8 50.

A FARM FOR SALE.

The subscriber offers for sale the Farm, whereon he resides, called MORVEN, situate on Elkridge, sixteen miles from Baltimore. It contains about 636 acres, the most of which is prime plaster land—a considerable part in good cultivation, and nearly the whole in good heart. The soil is well suited to tobacco, corn, wheat, and other grain, as also grazing, to which indeed it is uncommonly well adapted. It has about 25 acres of first rate meadow land, lying on a stream called Elkhorn running through it, and which is now chiefly down in timothy. The farm also binds a considerable distance on a branch of the Patuxent, and is bordered to that extent by rich meadow land, which although subject to overflow, could easily be rendered valuable *grazing ground*. The character of this farm is well known in its neighbourhood, and the proprietor thinks he may confidently say it ranks among the best on the Ridge, at least as regards the natural qualities of its soil, and susceptibility of improvement—he also feels warranted in stating, that its actual condition (the effect of a course of several years improvement,) will be found such as would render immediate and handsome returns to a farmer of capital.

The dwelling house is large and comfortable, and in good condition, having within a few years received extensive repairs, and an addition at considerable expense—most of the outhouses are also in good condition, and these include a dairy, with a fine spring of water, good quarters for the labourers, corn and meat houses, ice house, &c. On the premises is a spacious garden with a variety of the best fruit, and two apple orchards, one of them just coming into bearing. In point of prospect this inland situation is thought to be inferior but to very few; and, in respect to *healthiness*, it is with confidence pronounced equal to any in a district of country, proverbial in that particular. The water is excellent, and springs abound in every field.

The farm would be sold with or without the growing crops, and possession given when wanted: a liberal credit would be allowed upon a large portion of the purchase money. The title is indisputable.

Application to be made to the subscriber on the premises.

JOHN G. PROUD.

Elk Ridge, near the Church, 31*st May.*

For further information relative to this Farm, the proprietor has permission to refer to Nicholas G. Ridgeley, Esq. Baltimore.

Printed every Friday at $4 per annum, for John S. Skinner, Editor, by Joseph Robinson, at the North West corner of Market and Belvidere-streets, Baltimore, *where every description of Book and Job printing is executed with neatness and despatch*—Orders from a distance for Binding, with proper directions, promptly attended to.

AGRICULTURE.

MONTGOMERY COUNTY AGRICULTURAL SOCIETY.

Rockville, May 15th, 1822.

J. S. Skinner, Esq.

Sir: The following resolution was adopted by the Agricultural Society of Montgomery county, Maryland, at its last semi-annual meeting on the 9th March, 1822.

" *Resolved unanimously*, That the thanks, of
" this Society, be presented to Archibald Lee,
" Esq. for his address, delivered at this meeting,
" and that he be requested to furnish a copy for
" publication, in 'the American Farmer,' and
" the 'Rockville True American.'"

Agreeably to the view of the Society in this resolution expressed, I herewith enclose a copy of the address, which if it meets your approbation as fully as it does that of the members of this institution generally, will be secure of a place in your paper. I cannot here, sir, deny myself the pleasure of communicating the following resolution of the society passed in August 1821, expressive of the sense of the society, of the merit of the work you are now engaged in, and which was ordered to be published.

" *Resolved unanimously*, That it is the opin-
" ion of this Society that 'the American Far-
" mer,' Edited by J. S. Skinner, Esq. is eminently
" calculated to promote improvements in Agricul-
" ture, and rural economy, and that it merits the
" patronage of every friend to such improve-
" ments."

Some delay has occurred in the transmission of the copy of the address before mentioned.

I am, Sir,
Very respectfully,
Yours, &c. &c.
Z. MAGRUDER,
Recording Secretary of the M. Ag. So.

ADDRESS

Delivered before the Agricultural Society of Montgomery County, by Mr. Archibald Lee, *on the 8th March*, 1822.

It affords me much satisfaction, that I have an opportunity of congratulating you, my fellow citizens, upon the formation of a Society for the improvement of Agriculture and Rural Economy in this county. An institution, to whose utility almost all the sister states bear the amplest testimony; and from which our county cannot fail to derive substantial benefits, if it be patronised with the usual liberality that characterises our fellow citizens.

After the able address of our friend, F. S. Key, Esq. my feeble efforts will avail you little, save to revive the deep interest that eloquent advocate excited in all his hearers. I have to regret, that this duty did not devolve on one more competent to its performance. Honored by your request that I should address you, it has become my duty. Permit me to solicit your kind indulgence, to such remarks as I have had time to prepare for the occasion.

The subjects of Agriculture and Rural Economy, embrace such a variety, of the dearest interests of Society, by their immediate and relative influences; so much has been said, and so much has been written thereon, that I confess I approach it with humility and diffidence; convinced as I am, that what has been acquired, bears an almost infinitely small proportion, to the information still in store for the husbandman.

That is the noblest object for our rivalry, which enriches and enlarges, by the improvement of its means!

The objects of this association, are to effect improvements, in the Agriculture and Rural Economy of our county—to add to the intelligence of our community, to diffuse correct information, to ameliorate the manners of its inhabitants, and to chasten their moral character.—The means we hope to use are, exertions, examples, stimulants, and the good will of society—by cherishing good feelings, by mutual sacrifices, by perseverance and forbearance, much may be obtained in so good a cause. We have endeavored to induce our fair friends to cheer us with their countenance, by embracing those subjects for premiums, more peculiarly within their province; aware as we are, that all our enterprises obtain increased value, when warmed by their approving smiles.

Agriculture has been emphatically termed "the most important, and useful of the arts;" and indeed, it would appear to have held this rank, from the earliest periods of civilization.—The poet, the sage, the philosopher, have in all ages made it the theme of their warmest eulogies. When we look through the long vista of past ages, that have witnessed the rise, the fall, and the resuscitation of republics and of empires, we find mankind retaining their esteem, for this pursuit. The Egyptians, the Hebrews, the Chinese, all bear testimony in its favor; amongst all it ranked the first. How beautifully interesting is the sublime and touching narrative of the steward of Pharoah, rendered in holy writ. The Augustan age furnished no theme, so abundant for her fairest poets and orators, as that of Rural Economy. Wit, eloquence, declamation, found there, the richest scenery, and an unbounded field; its charms, its utility, its influence upon society, were sung by the Grecian and the Latin Bards, in their richest and sweetest strains. How strikingly interesting, were those ceremonies performed by the heathens, to propitiate Ceres, as the goddess of harvests.—Hymns and libations, processions with her image, through their fields of grain; all endeavoured to invoke her smiles and her protection of their husbandry.

Through that dark period, so aptly termed the iron age; when science slumbered, or kept its vigils in monastic retirement; when Barbarism supplanted all the other arts, Agriculture survived to cheer man with its smiles. When the adventurous Spaniard sat foot upon the soil of that paradise of the new world, it was already beautified and enriched by Agriculture. The bright luminary, which dispensed its genial rays upon the Peruvian husbandman, was alike adored with Manco Capac and his gentle associate, whom their tradition taught them to believe, had descended from the Heavens to instruct them as a favorite people, in this first and best of arts.—Among the Aborigines of this country, the most striking evidences of our common descent appear in the feasts they celebrate in honor of this art. The Cherokees, by far the most enlightened tribe of our red brethren, commemorate at stated periods, by dances and religious ceremonies, the return of their harvests. All history informs us, that man commences civilization only when he becomes a cultivator of the soil. Hunting, herding, fishing, tend to harden and to barbarize him. In these pursuits, he is unaccompanied by that companion, given by nature to soothe him under affliction, to soften his character, and to fit him for domestic happiness; by cherishing the best affections of the heart. Nor are the pledges of those affections ever around him to stimulate the exercise of his intellectual and physical powers.

For centuries past, the ablest scholars have devoted their labors to explore the arcana of nature, in search of those treasures, that give fertility to the soil, and repay the husbandman for all his toils. The war-worn soldier, the veteran statesman, the ingenious artist, and the skilful mariner; seek this inexhaustible field of rational enjoyment, where occupation and exercise sweeten fatigue, and repay them by abundance, content and repose. 'Tis the only pursuit of this life, which has afforded to mankind an uninterrupted bond of friendship and brotherhood.—Strife, envy, ambition; those varying and domineering passions; sooner or later sever us in all others. 'Tis the province of large cities to engross the genius, and too frequently the honors of a community; of them it has been aptly said, "they absorb all the honors of producing and possessing greatness, yet they shed little lustre on their less eminent inhabitants." The pursuits of a busy town, leave but little time, for the cultivation of the finer and inestimable feelings, that demand the boundless space of nature to develope in. All there, is hurry and noise. Who is it, that has lived amid the engaging scenes of rural life, insensible to their influence and their charms? The paramount association of man is full of rural images; his attachment is to a particular spot, to early pursuits, to the sports of his boyhood, which revive favorite ideas long passed, and conjure up the most fascinating and endearing recollections, till he exclaims with the poet—

" Hail ye blest haunts of my childhood,"
" The lawns and the bowers that I loved!"

He who teaches his brother to add one spear of grass to feed the animal, or one grain of wheat to nourish the human race—who instils moral precepts and brotherly love; will live in the hearts of mankind as their benefactor, during his pilgrimage here; he will be enshrined in the affections of those he leaves behind, and open a path to a future life, lighted up by virtues that never fade.

Cincinnatus! Washington! What imperishable laurels crown these heroes! Such ever-greens descend in all their vernal beauty to unborn millions. To such conquerors, no necks bend, save those of ignorance, idleness and vice. Independence, content, patriotism, are their bequests; and mankind are their heirs.

Many pursuits are ardently followed for the intellectual pleasures they afford. In agriculture, we find a combination of truth and knowledge, with the greatest practical advantages. "Discoveries in this science, extend from our time and country, to future ages; securing to distant generations, the means of subsistence, enjoyment and multiplication." By engaging in the examination of inorganic matter, and tracing its process through its various stages, till it reaches its highest destination, its subserviency to the purposes of man, our minds are enlarged: Nor are we limited by the study of the inanimate part of the creation. In this pursuit a portion of our affections is divided amongst our domestic animals; whose growth and increase, participate with our children, in our tenderest cares and anxieties. Is it not a striking evidence of man's superior destination, that the rest of the creation, animate, as well as inanimate, grow under his fostering hand, and exclusively for his purposes?—What then can prove more grateful, than a knowledge of those causes to which we are indebted, for the origin, progress, and maturity, of the means of sustenance, and to which all around own a similar debt. Ignorance in the possessor of the soil, of the manner in which it ought to be cultivated: is far less excusable, than want of information in any other of the pursuits of this life: 'Tis an ingratitude to a bountiful Providence, who hath given us this abundant means of life and increase, at the same time that it is a neglect of our temporal interests.

Need we call your attention to the instances so familiar to all of us, where impoverished soils, have, by careful husbandry, remunerated the proprietor, in comfort and independence?—Contrast the renovated farms within your knowledge, with the barren wastes, that unfortunately spread over so much of our country. 'Tis not alone by increased wealth, that the industrious, and the enterprising farmer is repaid. His stock of information is enlarged; and what is all important to the enjoyment of that wealth—health is insured. Some of the fatal effects of disease and death, are, in all climates, attributable to slovenly husbandry, and neglected grounds. Swamps undrained, become the depositories of stagnant water, made fœtid by putrid vegetable matter, whence the whole country around is filled with miasma. The pure fountains so essential to our comfort and health, are choked up by wasted soils. The very access to our habitations, is grown up with rank weeds; which in going through the regular decomposition of matter, surcharge the atmosphere with a variety of diseases, that baffle the skill of the ablest physicians. Your labour is rendered unavailing, your health is destroyed, your capital is impaired, by slovenly husbandry. Your fields are filled with briars and thistles; poverty, discontent, misery and mortification, are the sure attendants on ignorance and negligence; whilst abundance, health, cheerfulness and content, are united to a propriety, a neatness, and an appearance of comfort, that gladden the eye, and compensate the heart of the judicious husbandman for all his toils.

The disinclination to enter into agricultural societies, would appear to exist in this quarter of the Union, to a degree unknown elsewhere. This supineness, this miserable apathy, and indulgence of undue prejudices, on subjects so intimately connected with our best interests, is to say the least, a fatal proof of the entire ignorance of the objects, as well as the advantages of these institutions. When we turn our attention to our sister states, we find the most distinguished citizens not only taking part in, but most prominent in superintending, in patronising, in encouraging by talents, weight of character, and contributions, societies gotten up for the improvement of agriculture and rural economy. These wise, these patriotic, these eminently useful citizens—these enlightened statesmen, whose public stations, and services, have not only insured the gratitude of their own country, but have raised her to a commanding rank amongst the nations of the earth; cherish agriculture through every medium, well aware, as they are from a deep insight into society, and thorough acquaintance with the springs of action, of human nature, that the moral intelligence of man, is to be improved more directly through the early principles of religion, of subordination, of enterprise guided by practical pursuits; of the various, yet inseparable relations, tied up in the husbandry of the soil, and its twin sister, Rural Economy, than through all the other resources that learning and ingenuity have devised. Is there in our circle, an individual capable of rejecting the means cherished by the immortal Washington, to benefit his country? His attachments to this pursuit are well known. Most justly did he esteem it first in importance, first demanding his example. How could the soil he fought so nobly to defend, prove useful; how could this splendid empire, and all her vast resources, her laws, her peace, be secured, but by this pursuit? And will it not be admitted by all, that the enterprise and intelligence of her citizens, when limited to their own farms and personal exertions, tend to protract the growth and improvement of a country. Mr. Madison, the early associate of those profound writers on policy, and of those pioneers, to all the glory of this wonderful and admirable constitution; takes pride in presiding over the destinies of a similar institution in his own county, to that, Mr. President, entrusted to your care—and whose paternal regards will be as effectually evinced, in the performance of the simple duties attendant upon that office, as the splendid achievements of his high and imposing chief magistracy. These simple, these interesting pursuits, approximate us to the source of all intelligence—for who is it that can reap the blessings of a well regulated farm, and neat household; of an amiable partner in life; of dutiful and affectionate children and servants; nay, of the very domestic animals that stock his farm; of his luxuriant harvests, of that peace of mind, that quiet, that beautiful order and propriety that pervade all around him, and present the most enchanting landscape; without feeling his nature exalted, his intelligence enlarged, his heart expanded with gratitude to an all wise, and an all good Providence? Reduce the subject to one of mere interest, and attend with me to the experience of an able, and acute statesman. Whatever view our prejudices may dispose us to entertain towards that learned and intelligent magistrate; all agree in meting out to him, the merit of deep political information, and a thorough knowledge of man. In a late address to the legislature of New York, Gov. Clinton speaks thus of these societies:—

"The labours of agriculture, have, for the last season, been crowned with abundance, and the institutions which have been founded for the encouragement of this important pursuit, continue to produce the most beneficial effects. A great amelioration, within a few years, is observable in the department of rural economy. The rapid improvements of live stock, the judicious application of manures, the increased production of the various kinds of grain, the invention and adoption of excellent implements of husbandry, and a growing attention to the promotion of horticulture, have unquestionably originated in a great degree, from institutions which concentrate the fruits of experience, which apply the discoveries of science, and inventions of art, and which excite into activity, all the generous principles of emulation, and all the latent powers of improvement."

This passage is in itself a volume for you to reflect upon. We must not say that our soils are too poor, too much exhausted, that we have not the means possessed elsewhere. The county of Norfolk, in England, was forty years since far more reduced and more desolate than our county is at this day; yet to the enterprise of one man, and in the life time too of that most eminently useful and valuable individual, does England owe the vast importance of that county, now the granery of her Island. Would you know the means he used; Agricultural meetings, personal exertions, encouragement of rural economy in all its branches, premiums to induce emulation, but above all, as he has frequently declared, the rapid amelioration of the tenants in their habits, manners, customs; their intelligence and high respectability.

Agricultural Societies collect information with greater facility, and they distribute as much in a day, as individuals could in months. They do what is equally important to society; they separate the good from the bad, and thus prevent those experiments so injurious to practical men, by presenting in one view the experiments of all sections in implements of husbandry, in household manufactories, and in farming in all its relations.

Agriculture, commerce, and manufactures are all intimately connected. 'Tis true we can live by the first, but the others are essential to the present order of society. Nature has blessed us with a fine country and an abundant soil—all well regulated farms will afford a large surplus, which must be disposed of, or the labour of the cultivator is in that degree wasted. A great portion of the capital of individuals, unoccupied by land, will be engaged in one or the other of those pursuits. What crude articles we can manufacture at home, and are not more useful to us, in the necessary barter we carry on with foreign nations; it is evidently our policy to have prepared for our uses at home. Commerce would certainly be useless, and the means of carrying on the government would fail, not only in exigencies but during a profound peace (save when wrung from the industry of our people,) did we not exchange our surplus commodities with other powers, either for their productions or their manufactures. We have still unoccupied a large portion of the Atlantic states, and an inexhaustible territory to the West. To force the population from tillage into manufactories, would be most unwise, both as regards the health of those occupied, and the interests of the land; as much so would it be, to drive our population from the land to the cities, and upon the ocean. Manufactures will assuredly succeed, in a due proportion to the means engaged in them, and the fair demand of the country, for the articles manufactured. Any undue attempt to give either of these three great and important interests a preponderance, must be productive of injurious consequences to society. No exclusive privileges should be given; none should be asked; above all, there should be no jealousy manifested; they will soon appear as tri-parties to the great fundamental principles of our union, and of our internal policy. A due degree of vigilance should characterise each of them; but forbearance and good will must be the companions of that vigilance. It is a consolation to us, that our manufactories are so planned, as to prevent much of that disease and premature decripitude, which is too prevalent in the great manufacturing districts of Europe. That unwholesome air which attends the concentration of their people, is here much corrected by judicious precautions; and in a condensed population, such as some of the Eastern states afford, it may become problematical, whether more strength is not retained, by this mode of disposing of any excess they may have, than by allowing it to emigrate to a distant quarter in search of agricultural occupation: but in our state no such question can arise; we unfortunately have much unoccupied land, and are deplorably deficient in rural economy.

This country, my friends, holds a high rank in the improvements and inventions that experience approves. To Mr. Thomas Moore, the union is indebted for an excellent treatise on farming, in which the superior merits of deep ploughing are set forth in language simple and impressive. Davis, Warfield, Brown, and several others have invented, and furnished ploughs equal to any used at this day. Stone-fences have been built upon as cheap and probably as durable a plan as any extant. One individual has erected more than four miles of this valuable enclosure with his own servants. Hedging has received a trial in the various sections of the county, and thrives sufficiently to justify its general use; we abound in excellent materials for high-ways; our streams are capable with proper management, of supplying us with water for machineries, and for irrigation. Our meadow grounds are ample for all the purposes of our farms, and may afford us a considerable surplus for market. Our tobaccoes are unrivalled in quality; our grain districts supply excellent bread, and our fountains the purest and most salubrious water. Our local situation is certainly commanding, being upon the direct line between the seat of government and the western world. In fine, we possess within ourselves all the means, if judiciously exerted and applied, to convert this county into a fertile, a picturesque, and a most desirable abode. Allow me before we part, to turn your attention to the subject of premiums, and to offer for your consideration, the ideas that have occurred to me as important in their distribution. Upon the judicious selection of the objects that are to receive encouragement, will in a great degree, depend the success and the utility of this institution to the community.

The plough must be admitted on all hands, to be the most important implement of husbandry: it therefore claims your first attention. The harrow ranks next. In tenacious soils, the hoe was wont to be preferred by those who cultivated tobaccoes and indian corn; and in sandy soils it is still highly esteemed; but for all the essential purposes of a farm, experience proves that there are three necessary implements in tillage, viz: the plough, the shovel plough or cultivator, and the harrow. These are all substitutes for the spade and the rake, and still many degrees inferior. On the preparation of the soil, the value of its product mainly depends. Consequently those implements best adapted to that object, merit our primary consideration. As the spade and the rake enable us to prepare our gardens to the greatest advantage, so the implements used upon our farms, that approach nearest to them, must of consequence prove most important to the farmer. That even the garden implements are far from being perfect, we must all acknowledge; how many degrees less perfect, our farming implements are; will be apparent to every one, who contrasts the relative quantities produced by these several cultivators, the disparity in the profits being inconceivably great. After the grain, used in giving us the staff of life; the plough, the harrow and the hoe, are then the fairest objects for premiums: next to the implements with which we prepare our soils, we rank the means required, to put them in motion. In some countries, horses are altogether used—in some, mules are preferred, in others oxen, are the favourite force applied to the draft: and one of the most polished nations, in many districts depend upon the cow for this essential duty. With us, the horse, the ox, and the mule are all made subservient to this great purpose. These then are the next fairest objects for premiums. Next in order come all those animals useful to feed or clothe man—as the sheep, the hog, &c. The cow is after all perhaps the most important—she gives milk, butter, cheese, meat; she is converted into all the purposes of draft; and in some countries her hide is used to clothe man. In due order follows household manufactures; with which I would be disposed to unite the most useful and substantial of the domestic manufactures. It is certainly important that the mode of bringing these various objects into fair competition, should receive our attention. Without meaning to innovate upon usual, and I fear establisehd customs, I beg leave to add, that observation and experience point out the propriety of extending the field, to farms, to stocks of cattle, and to the general practices and management of the farmer, in the various seasons of the year. The injurious consequences that flow from the appropriation of all your premiums, to individual animals, or to the partial cultivation of crops, tend to obstruct the current of improvements. It is evident that our means, our attention and our intelligence being devoted to a single object, occasion the neglect of the residue. Ambition and pride may be fostered, but no general good, no general improvement can result to the community.

As it is necessary to improve our stock animals, we must give to that object a portion of patronage; but it should be minor to the improvement of an entire stock; and the same idea 'tis believed applies with equal force to crops. Some kinds of vegetables may justify a limited cultivation for reasons that are apparent; yet the primary object should be the general tystem of farming and of the farm: that farmer who can shew the best kept, and most highly improved stock of horses, cows, sheep and hogs; a well cultivated farm in all the crops that he raises; great neatness, care and economy in his management of his soils; and the largest quantity of manures to invigorate, and renovate his lands; will turn his labour to a greater profit in the general account than his neighbor is likely to do, whose cares are absorbed in producing the fattest animal, or the best acre of produce.

Gardening and the dairy are important objects in the rural economy of a country. These being more in the province of females, are too frequently neglected. They are nevertheless essential comforts, and often become sources of profit—Good fruits, vegetables, poultry, cheese, butter and milk, are by no means secondary considerations in a well regulated family: cheeses in many countries, a substitute for meats. It was formerly made in this county, and we may hope it will again be the product of our dairies. Cider is an article of profit, and a beverage in which we may vie with the north. With equal attention our trees would be as long lived as those of any country. Household manufactures, are important in rural economy. We have a population unavoidably idle, during our inclement winters. There are many of the most useful articles of clothing that may be prepared to advantage in our houses. Habits of neatness and industry will accompany this pursuit; our females will be agreeably and usefully occupied in teaching their servants, and in performing themselves the lighter duties of the wheel and the loom. There still remain amongst our thrifty, notable, and spruce dames, instances of househould manufactures, that will in beauty, neatness and excellence of fabric, rival these obtained from abroad.—Thus do we secure the double advantage of saving our capital, and enlarging our stock of intelligence; whilst we afford useful occupation to that portion of our population, and retain them for the purposes of labour, called for by our mixed husbandry.

I have already trespassed too long upon your attention; the deep interest created by the subject, which encreased as I progressed, must form my apology.

REPORT

To the House of Delegates of Maryland, by the committee on Internal Improvement, to which was referred so much of the Executive Communication as relates to that subject. December Session, 1821.

The committee to whom was referred so much of the Governor's Message, as related to Internal Improvement, respectfully beg leave to submit the following report:

Your committee cannot but feel a deep conviction of the importance of the subject which has been submitted to their consideration, when they look over the vast field it presents to view, and reflect upon the intimate connexion it has with the prosperity of the Commonwealth. To improve the internal resources of a nation has always been considered, by the wisest statesmen, the surest method of promoting its strength and its happiness, and has accordingly enlisted the zeal of the most enlightened patriots of every age. It is rousing into active life the dormant energies of the soil; giving spirit to the enterprise of the citizens; turning to a more profitable account the labors of husbandry; creating new fibres in the body of the republic; infusing into it a more wholesome circulation, and in its effects "almost annihilating space:" thus by bringing neighbour states into closer proximity; equalizing their mutual advantages, and restoring the balance which the partial dispensations of providence may have rendered necessary to the wants and the weakness of the less favored.

To a young state these improvements are vitally interesting; a spare population becomes vested with all the faculties which render a more numerous one efficient and useful; invention and skill supply the force of numbers, and the same advantages are afforded on a large scale, which result from the application of all kinds of labor saving machinery, to the details of industry; thus facilitating the work of civilization and refinement, and giving to the tardy gait of years, the strides of centuries.

To the state of Maryland this subject is presented with the most imposing pretensions. Situated in the very bosom of our great confederacy, she stands equally open to the commerce of the north and the south, and from her fortunate proximity to the most important points on the western waters, possessing a control over the products of that region which no rivalry can arrest from her enjoyment; a control which at no distant day must render her the mistress of the great western trade; the guardian of the gates through which the treasures of a boundless country shall find their vent, and which shall draw to her shores the riches of an incalculable commerce. In addition to this, the bounteous hand of nature has spread through her confines one of the most magoificent bays in the world, upon whose expanse, float securely to their market, the richest portioos of her produce. The Susquehannah and the Potomac washing her remotest borders, open to the industry of her citizens, the prospect of exhaustless treasure, while innumerable fertilizing streams between, literally irrigate every field, and afford an immeasureable supply to every demand for internal improvement.

These advantages have not been overlooked or unappreciated by the citizens of our state, and numerous efforts founded upon private as well as public patronage, to facilitate and improve the means of internal transportation, attest the interest it has excited; and your committee rejoice to find that this subject begins still more to engross the attention of every intelligent portion of the community. In this, our state does but respond to the pervading sentiment of the nation. Since the late war, there is scarcely a part of the union which has not directed its attention and its means to this question, and the result has been, an improvement in the general aspect of the United States in the course of a few years, which considering the population and the wealth of the country, and the extent of territory upon which these improvements have been spread, is perhaps unequalled in the history of free nations.—The state of Maryland has, from the period of the revolution to the present time, evinced a most commendable disposition to lend her aid to every undertaking which professed to encourage these objects, and although at times an injudicious calculation may have thwarted her success or disappointed her hopes, still she has derived many and most permanent advantages from the well timed appropriation of her resources.

At the present juncture much is required of her. The competition of formidable rivals, although, as your committee believe, it cannot subvert her strength, may, for a long time retard the full and profitable exercise of it; and it therefore becomes a matter of the most urgent solicitude, that we should be in a situation to keep pace with the zealous enterprise of our sister states, who are at this moment contending with us for the prize of future power and importance in the commerce of the west. Though that struggle be maintained with all the perseverance which self interest can supply, and the effective force which a nervous and a wealthy population can bestow, Maryland must nevertheless, by a discreet and intelligent expenditure of her means, aided, as she is, by a more than countervailing beneficence of providence, forever hold a successful mastery in the strife

Your committee conceive that this subject is urged upon the attention of the state by other considerations. The present generation seem to be more imperiously called on for the adoption of a system of policy in regard to this question, than any other that has preceded them, and perhaps more than their successors ever may be. The tranquilized state of Europe; the establishment of what appears to be a more settled order of things; the general competition in every branch of trade, appear more decisively at this time, than at any former period, to throw the several states of our union back upon their own resources, and, of necessity, to drive them to the contemplation of their intrinsic energies. The period is rapidly approaching, at which it is conceived a large manufacturing interest will be fostered in our country, and the attention of our population applied to furnish a substitute for a vast variety of the present commodities of trade, which, before the lapse of many years, must become the product of our own labour and the growth of our own soil. This consequence has been partially developed at the present day, by the entire change of our political relations with the states of Europe, and it is believed that so far as regards the condition of this continent, that posture of things will be permanent. From this view, it is obvious, that the labor of our country must be differently applied, and the current of our national means turned into new channels.

Your committee beg leave further to say, that in their opinion it is impossible to give a more profitable direction to the policy of the government, than by the application of its strength to internal improvement. A judicious effort in this way is always sure to produce a rich harvest of remuneration, and it is believed, that every expenditure required by it, is completely reimbursed to the country, almost before its deficiency is felt. There is scarcely a turnpike road constructed, or a canal made, which does not, in the course of a very few years, yield to the community, however unprofitable it may be to individuals, a full recompence for its creation; and indeed from the facilities which the state of Maryland every where presents to this species of enterprise, and the increasing trade that must inevitably be the consequence, your committee do not hazard too much by declaring, that a well selected scheme for the improvement of the means of internal transportation, must become one of the most profitable objects in which capital could be invested.

In the discharge of the duty assigned to them by the house, your committee conceive it necessary that they should present a general view of the most prominent objects of improvement, at present within the contemplation of the state, and as the governor's message more particularly designates the river Potomac, as a subject of attention, they would beg leave to make some remarks in reference to it.

The commission which was authorised by the resolutions of last session, to unite in an examination of the river with a similar commission from Virginia, have been delayed by the tardiness of the latter state, in the commencement of this work. Although the Virginia commissioners have been named by the executive of that state, obstacles unknown to your committee, occurred to prevent the execution of the design entrusted to them, until the lateness of the season rendered it impracticable to proceed to any satisfactory examination of the state of the river. It is presumed however that all parties will be ready to progress in the contemplated enterprise as soon as the approaching year may become most favourable to their purposes; and as the objects for which this commission was created, are of very interesting importance to both states, your committee would recommend a continuance of the resolutions; and in order to apprize the executive of Virginia of the feeling of the state upon this subject, your committee would respectfully suggest the adoption of the additional resolution accompanying this report.

As to the improvement of the navigation of the Potomac, your committee would say a few words. This noble river, from its peculiar course, holding its way exclusively through the confines of the state; watering an extensive and fertile region; receiving the tribute of some of the finest streams of our country, among the rest the Shenandoah, whose protracted channel sweeps through the most luxuriant valley in Virginia, must always be considered one of the richest possessions of our state, and eminently entitled to the attention of her citizens. Amid these advantages, it is the unfortunate lot of this river to present obstacles which must, for a long time, retard the course of improvement, and exclude the benefits of a commerce longing to seek that channel. It is remarkable for having the greatest fall, perhaps, of any river in the United States, where an ascending navigation is attempted, and the consequence is, not only an accumulation of rocks and rapids, which can only be surmounted by the arduous toil and disciplined skill of the boatmen, but a liability to extreme lowness of water which has been known in some extraordinary years to have prevailed through the whole boating season, almost to the entire exclusion of that mode of transportation. These causes have operated to produce a neglect of the trade of that river, so far as to reduce it to an amount certainly insignificant when compared with the illimitable riches which might be collected on its banks. The state has already spent large sums of money in the fruitless endeavor to seize upon its treasures, and the reiterated attempts of a well organized and richly endowed company, give a striking demonstration of the futility of attempting to vanquish obstacles in their nature insuperable. The time doubtless will come, when the enterprize of the state aided by an abundant treasury, and the keen edged activity of commercial wants, will devise and execute some project which shall yet put Maryland in the full and perfect enjoyment of this yet unconquered tributary. That day is certainly not at hand, and the slender supplies of the state, your committee conceive, would be lavished with a useless prodigality, upon any attempt to render the navigation of the *bed* of that river more practicable than it is; indeed every thing seems to be done which can be done in regard to that object. The channel has been cleared, canals have been constructed around or through all the important rapids, and the most considerable falls are provided with durable and substantial locks; the trade, nevertheless, still languishes under unsubdued impediments. The only method of improvement therefore which could be suggested, would be the construction of canals through all that part of the country in which the river presents the greatest body of obstacles; an undertaking which could only be achieved with the wealth of an empire.

Your committee are naturally led from these speculations to a contemplation of the resources of the state in another quarter. The river Susquehannah has been brought upon the public view with a renewed interest, and the means of improving it have been already submitted to this committee, upon which they have had the honour to make a distinct report. They had the satisfaction to find their report promptly adopted, and the bill which accompanied it speedily passed into a law. This river stands in a very different predicament from that of which we have just spoken. It appears to be now satisfactorily ascertained, that every work which is calculated to improve the bed of the river, and render it more practicable to the purposes of navigation, must ultimately offer a rich remuneration to the state, in an increased supply of produce. The Susquehannah, unlike the Potomac, has, until it approaches within a short distance of the tide, a moderate fall, and rolls over a wide and comparatively smooth bed; is more regular in the rise and fall of its water, and in every respect is more propitious to navigation. Within forty or fifty miles of the tide, it passes through a range of country which falls with great abruptness to the Chesapeake, and presents innumerable ridges of granite, which being broken in the bed of the river, offer almost the only serious obstacles which occur in its passage from the borders of the state of New York. Some late efforts evince the entire practicability of surmounting these difficulties, and there no longer remains a doubt that a judicious effort applied to the improvement of this lower portion of the river, must be productive of incalculable benefit to the state. This once achieved, the products of an immense extent of country, reaching through the heart of Pennsylvania and penetrating into the interior of New York, are at once poured into the lap of Maryland. For an estimate of the value of this commerce, even under its present disparagements, your committee beg leave to refer to the separate report already made by them upon this subject. This work therefore, in the opinion of your committee, deserves the serious and immediate attention of the legislature, and it is hoped that the measures already projected by the spirited and meritorious enterprise of the citizens of Baltimore, will have the effect to demonstrate the importance of the design, to the great and permanent interests of Maryland, and speedily to enlist a more decided patronage in its favour.

The next object of concern in reference to the duties of your committee, is to be found in the execution of a design which was conceived as long ago as the year 1799, and as yet but partly accomplished, to effect a water communication between the Chesapeake and Delaware bays. A route was at that time marked out by commissioners appointed by a company incorporated for this purpose (the commission consisting of gentlemen of Pennsylvania, Delaware and this state,) which was supposed to be the most eligible course presented by the character of the country of the peninsula, as well as by the convenience afforded in the supply of water. This route extended from a selected point on the Elk-River to the Christianna, in Delaware, and the supply of water was to be obtained from a feeder, reaching from the upper district of the former. From the want of funds, as well as from other causes of less importance, this work did not progress further than the preparatory stages of the design, by the partial completion of nine or ten miles of the feeder, in which attempt the whole capital originally paid in, amounting to upwards of one hundred thousand dollars, was expended.

In the session of 1812, an act passed this legislature, expressing a design to co-operate in the original scheme, by a determination to subscribe for two hundred and fifty shares of the stock, whenever the government of the United States, and the states of Pennsylvania and Delaware should have subscribed in their individual capacities for amounts therein specified. Since the passage of that act, no movement has been made towards the ulterior accomplishment of this work. As the interference of this state appears to be of doubtful policy, a bill has been submitted, which yet remains upon the table of the house, recommending the repeal of that act before the performance of the conditions by either of the parties, shall have placed this state under an obligation to redeem the pledge. Your committee do not hesitate to recommend the policy of this procedure, if circumstances which may be unknown to them, have not before this occurred to render their withdrawal a violation of faith. In this recommendation, your committee deem it necessary to say, that they are far from being actuated by any sentiment hostile to the prosperity of the projected enterprise; that, on the contrary, they believe it to be a work from which a very respectable portion of the state of Maryland may derive essential advantages, in the choice it may present them of an intercourse with two of the most extensive markets on this continent; and also from the facilities afforded to a trade with an extensive manufacturing district, through which the intended canal is destined to run; but your committee conceive the propriety of the measure is urged by a consideration in the first place, of the limited means of the state, at present applicable to such a purpose, and more especially, when, by the terms of their enactment, they may be called upon, almost without notice, to perform their stipulation: and in the second, from a reference to the much superiour interest in this undertaking in the government of the United States, and the states of Delaware and Pennsylvania, which it is presumed, is sufficiently cogent to induce them of themselves to finish the work—this subject always having been one of favourite interest at Washington, and to the city of Philadelphia, a matter of such engrossing importance, as to induce a belief that she alone could enter, single handed, upon the enterprise. These arguments no doubt would have been better urged against the policy of the act of 1812, at the time of its passage, and may now appear to fall with ill grace from the state of Maryland. Your committee would, however, again repeat, that unless the withdrawal can be made without tresspassing upon the proper expectations of the other parties, much less trenching upon ther interests, they would reprobate the act and recommend an instant provision to be made for this anticipated demand, no matter what may be the embarrassments of the treasury, since they should regard it their duty to inculcate the propriety of a most scrupulous adherence to every engagement, (if such this may be called,) howsoever indiscreetly it may have been made. In the present case, your committee do not perceive the existence of any such obligation, or that the state ever designed to bind itself to do more than good policy, evidenced even by a future state of circumstances, should require.

Such appear to be the most prominent objects of improvement in internal transportation by means of water, in the present contemplation of the citizens of this state. Every year may be expected to develope new schemes, and to suggest the wakening of some dormant power. Our country teems with the facilities of this kind of enterprise; and the wants of an augmented population, and a more extended culture of our soil, must, in a very few years give rise to projects, as yet unanticipated and unknown. There are many, however, rationally within the view of the present time; such as the scheme of a connexion between the Susquehannah and Potomac, by means of a junction canal, and its intersection at some middle point by another, leading to the city of Baltimore. This project is recommended by the command it would instantly afford to the state of Maryland, over the trade of the vast extent of country connected with the Susquehannah and its tributaries on the one side, and the Potomac and the Ohio on the other. The means of its accomplishment too, are considered as in no embarrassing degree difficult, while the revenue it would undoubtedly afford to the state, or to individuals concerned, must be great beyond the reach of any ordinary calculation. Other schemes, looking to the same object, the concentration of this extended trade in the city of Baltimore, have from time to time occurred to view. Among these may be ranked, a canal extending from York-Haven on the Susquehannah, to that city, which it is supposed will eventually furnish a substitute to the lower navigation of that river; a canal connecting the Potomac with the Patuxent; another uniting the Monocacy, Patapsco, and many others affording the means of an union with the upper country. The late attempt of the state of Pennsylvania to direct a large portion of the internal trade dependant upon some of the above mentioned improvements, to the city of Philadelphia, by forming a connexion between the Susquehannah and the Schuylkill, through the means of the Swatara and Tulpehoken creeks, which undertaking is said to be now in a state of prosperous forwardness, certainly furnishes an additional argument for urging at this time a consideration of these subjects upon the state, and more especially, in regard to all such improvements as relate to the navigation of the Susquehannah. That cause will, doubtless, operate to give expedition to the labours of our citizens, since delay must not only be attended with present privation, but possibly the exclusion of all future hope of enjoying a rich and lucrative commerce, now about to be lured into the channels of a jealous and powerful competitor. In many of these improvements, it will likewise appear, that the interest of the adjacent states is so obviously connected with our own, that we may safely confide in the expectation of their assistance in the undertaking. Thus every substantial work calculated to open the sources of the Potomac river, and to connect them with the western waters, must be a subject of equal concern to the states of Ohio, Virginia, and Kentucky, and would, unquestionably, insure their aid; while it is no less to be supposed, that the state of Pennsylvania, would heartily concur in our labours on the Susquehannah. Indeed, your committee have every reason to believe, that even now, a bill is before the legislature of this latter state, which, it is presumed, will meet with their approbation, providing for an immediate co-operation with the state of Maryland in the plan of improvement for that river, suggested in the bill reported by this committee in an earlier part of the session, and passed by both houses.

The advantages of transportation by water, over the most improved methods of conveying produce by land, will always render the former the most important objects of attention, and although the superior facility, on the score of expense, of making roads, may have a tendency to attract capital to that species of investment, yet this advantage is more than preponderated by the great disproportion between the two in the expense, the labour and expedition of carriage, as well as in the bulk transported. There are many articles of produce, also, whose size and weight, compared with their value and the distance from market, prevent them becoming commodities of trade so long as they are shut out from the means of water carriage; yet which, with this opportunity, may form no inconsiderable portion of the internal commerce of the country. There are others also, which, although of a more convenient bulk, are entirely precluded from a low market, owing to the expense of transportation. In regard to such articles, the uncertainty of their becoming a matter of profit, induces a negligent culture, and prevents them from arriving at that perfection which the activity of trade always communicates to an important staple. The difference of expense of transportation between roads and canals, is generally estimated as 1 to 6, and from that to 1 to 10 in favour of the latter; to this, also, may be added, the convenience in regard to size and packing of the burthen borne. In Mr. Fulton's report to the secretary of the treasury, in 1807, this subject is considered by him, and your committee would beg leave to make the following short extract by way of illustration: "I will now suppose," he writes, "a canal to have been cut from Philadelphia to Columbia, and its windings to make 100 miles, at 15,000 dollars a mile, or for the whole $1,500,000. On such a canal, *one man*, *one boy* and *one horse*, would convey 25 tons, 20 miles a day, on which the following would be the expenses:

One man, - - - -	$1 00
One horse, - - - - -	1 00
One boy, - - - - - -	50
Tolls for repairing the canal - -	1 00
Tolls for passing locks, inclined planes, tunnels and aqueducts,	1 00
Interest on the wear of the boat	50
Total	$5 00

"This is equal to twenty cents a ton for twenty miles, and no more than one dollar a ton for one hundred miles, instead of ten dollars paid by the road. Consequently, for each ton carried from Columbia to Philadelphia on the canal, the company might take a toll of six dollars instead of one, which is now got by the road, and then the flour would arrive at Philadelphia for seven dollars a ton, instead of ten, which it now pays." A little before the above extract, the same writer had given a calculation in regard to the road. "From Philadelphia," he observed, "to the Susquehanna at Columbia, is 74 miles; that road, if I am rightly informed, cost on an average 6,000 dollars a mile, or $444,000 for the whole. On it, from Columbia to Philadelphia, a barrel of flour, say 200 weight, pays one dollar carriage; a broad wheeled wagon carries thirty barrels, or three tons, and pays for turnpike, three dollars; thus for each ton carried, the turnpike company receives only one dollar." This calculation, founded as it doubtless is, upon a careful and accurate consideration of the question, demonstrates at one view the immense importance of the subject, and places the superiority of canals in the most prominent light.

From this communication, your committee would turn to the subject of the roads, upon which it is necessary they should say but very little. From the hilly and broken character of a great part of this state, as well as the difficulty of procuring a sufficient supply of water at the summit levels, it must ever be necessary to substitute turnpike roads in many of the important districts;

in the place of canals. To this species of labour, the public spirit of our citizens has been long since applied, and there is no state in the union more amply provided with excellent roads. The munificence of the general government, has, in the space of a few years past completed one of the most substantial, and best constructed turnpikes, perhaps in the world, leading from Wheeling in the state of Virginia, to Cumberland. This work is connected with the other roads forming a communication with the city of Baltimore, and has become the route of a very extensive trade. The line of communication however is interrupted by a space of about ten miles between Boonsborough and the Conococheague, which yet remains unpaved. It is indispensable this piece of road should be instantly completed. Your committee however conceive it unnecessary to suggest any plan for this purpose, as they believe the fullest reliance may be placed in the efficacy of the measure already submitted and adopted by this legislature. It is understood that the citizens of the upper counties of Virginia, have projected a scheme to shorten the distance between the city of Baltimore and Cumberland, by making a road from Shepherdstown, on the Potomac, to the last mentioned point. Should this enterprise be carried into successful operation, the diverging point would most probably be at Boonsborough. That circumstance however, your committee conceive should have no effect in retarding the operations of the state in regard to the proposed work, as in any event it is a matter deeply interesting to a very extensive and populous part of the country, whó suffer at particular seasons of the year, the most serious privations from the want of it.

While upon the subject of this road, your committee cannot withhold the expression of their desire to see some efficient arrangements made for the purpose of rendering the whole of this important line of communication free of toll, or subject only to such burthens as may be necessary to keep it in repair. The propriety of such a measure is urged by a multitude of considerations which have been so frequently submitted to the legislature, as to make it unnecessary to repeat them, and such appears to be the general accordance of opinion upon this question, that it is believed nothing but a deficiency of means has prevented the purchase being made long since. Your committee merely throw out this topic for the consideration of the house, as connected with the objects of their report, without pretending to suggest any plan upon the subject. Connected with this, also, is the subject of a bill now upon the table for the purpose of authorising congress to impose a small toll upon so much of the Wheeling turnpike as extends within the limits of this state; the object of this bill your committee believe to be politic, and they would respectfully recommend its passage.

Such appear to be the general topics within the range of the enquiry submitted to your committee. They have endeavoured to convey a faithful outline of the subject, without aiming at an exhibition of the details, which a more complete elucidation might demand. It is with some hope of recommending even a more general application to these speculations, that they have progressed in their work, as they feel confident the subject cannot be too soon taken up or too much dwelt on by the citizens of Maryland, who are compelled to maintain, by the resources of ingenuity and artificial improvement, the influence and political consideration in the confederacy which a small population and a limited territory might deny them. In order therefore to keep alive the attention and the zeal of the state upon this question, your committee conceive no better plan could be devised than the establishment of a Board of Public Works. As this however is a matter for which the state may not yet be prepared, and which may require much more information in regard to the objects of internal improvement than your committee have it in their power to present, they would recommend for the present, the institution of a committee to be selected by the Executive from among the most intelligent members of the community, with directions to report either individually or collectively to them, the most judicious course of improvement in reference to the roads, canals and rivers of the state, or such parts of them as may come under their notice. And further, that the executive be authorised, if they should deem it expedient, to cause surveys to be made and maps to be returned, of such districts, roads or water courses, as in their opinion may be necessary to the illustration of any proposed plan of operations. And that directions be given, that such reports be made, if possible, in time for the meeting of the next general assembly.

To this effect your committee have the honour to present the resolutions accompanying this report.

All of which is respectfully submitted.

JOHN P. KENNEDY Chair. of the Com.
House of Delegates, Feb. 11, 1822.

RESOLUTIONS ACCOMPANYING THE REPORT.

Resolutions, No. 1.

Resolved, That the governor and council be authorised and empowered, to take such measures in regard to the appointment of the time and place of meeting, and the adjustment of other preliminaries attendant upon the execution of the duties assigned to the commissioners appointed in virtue of the act passed last session, for the examination of the navigation of the Fotomac, conjointly with the commissioners appointed by the executive of Virginia, as they in their judgment shall deem most conducive to the prompt and wholesome execution of the said act.

Further Resolved, That the governor and council be authorised to draw upon the treasurer of the western shore for any sum of money which may be necessary to defray any reasonable and necessary charges growing out of the said commission.

And Further resolved, That the governor be requested to apprize the executive of Virginia, of the wish of this state, that the said commission should proceed to discharge the duties assigned them, as soon as the season and other circumstances may render it most proper.

Resolutions, No .2.

Resolved, That the Governor and Council be directed to select as soon after the passage of these resolutions as it can conveniently be done, nine of the most discreet and intelligent citizens of this state, as a committee for the purpose of reporting to the executive, either collectively or individually, as their convenience may allow, upon the most efficient, useful and practicable plans of Internal improvement, in relation either to the whole of the state, or such parts thereof as they may think proper respectively to select. And that the executive be authorised to supply any vacancy in said committee which may occur during the term of their appointment.

Further resolved, That to each person selected as aforesaid, the governor and council be directed to transmit a copy of the reports on internal improvement, by the committees of the Senate and House of Delegates respectively, and also a copy of the following instructions.

"You are requested to communicate to the executive of this state, as soon as it may suit your convenience, not delaying longer than the period of commencement of the next general assembly, such information as you may have it in your power to afford, in relation to the subjects of Internal Improvement within this state. More especially confining your attention to a description of the general face and character of the country—the elevations of the most remarkable hills and mountains—the nature of their minerals, the soil and vegetable productions—the courses of the rivers and creeks—the nature of the country through which they pass, and the produce in which it abounds. The means of connexion between important rivers; the facilities afforded to the construction of canals, roads or Railways; the prices of labour; the respective average charges per mile in making roads or canals; the probable advantages to the internal trade and commerce of each district by making such improvements, and all such other information upon these questions as you may consider useful."

Further resolved, That the governour and council be authorized to procure such general surveys of the rivers, water courses or districts of country, as they shall in their judgments deem necessary to the illustration of the subjects of Internal Improvement, and that for the expenses of the same they be authorised to draw upon the treasurer of the western shore.

FROM THE (LONDON) FARMERS' JOURNAL.

ON SOWING WHEAT AND BEANS ALTERNATELY.

Eastwood Farm, near Rotherham,
Sept. 29, 1821.

Sir,

On reading The Farmers' Journal of the 27th August, I noticed that a correspondent had called your attention to the practice of sowing wheat and beans, which you there said was getting into use in Yorkshire. By your last Journal, which I have received to-day, I perceive your correspondent is a Mr. Rhodes, who does not appear to give you all the information you wish to have. You may get whatever you wish from any of the farmers in the neighbourhood of Sittingbourn, Kent, where it is the common practice. I have followed that system fourteen or fifteen years, and introduced it into Yorkshire four years ago; therefore I feel it my duty to give you the following particulars. At the same time I also feel it my duty to caution those who are so burdened with parish rates, and other expenses, as to be losing their property rapidly, not to depend on this or any other system which they have not tried—but to give up such land while he can pay every one his due. But to those who are in a different situation, and who occupy strong land, which they have regularly summer fallowed after several broadcast crops, I can recommend this plan, being confident that the land will produce more and better crops without being injured; and as landlords are interested in their tenants' prosperity, if it can be proved that the land will produce more to the tenant, without being injured by this or any other system, surely all those landlords who have bound their tenants to summer fallow, or any thing else which is injurious, will not only set them at liberty, but assist them in introducing a better mode.

I once recommended this system (when it might have been of some use, had it been generally practised,) which you will see if you turn to your Journal of February 24th, 1812. I was the writer of the letter signed *J. S. T.* "On increasing the growth of Wheat." My desire was to benefit both farmers and the community, by pointing out a way to grow sufficient ourselves, without having occasion for foreign wheat, which was then selling as high as 130s. per quarter, as you will perceive by that paper. I feel sorry the words *plough flat* were left out, after Kent, in that letter. It ought to read thus: "It is the practice in most counties to plough the land into ridges, for all kinds of corn, and to sow beans broadcast, and in the county of Kent to plough flat, and drill beans." In other respects it gives a tolerably plain account of the plans I have pursued up to the present time.

In July 1817, I removed from the Isle of Sheppy, to this place, and as soon as possible put in practice the plan I had before recommended. I found the farm full of twitch (or couch,) coltsfoot, docks, and other weeds although it had been regularly summer fallowed; in about eighteen months I had effectually cleaned it *without fallowing*, except one field for turnips, but not without considerable expense, for which the price of corn since has not paid. The following is the way I cleaned and cropped it: immediately after harvest I set a sufficient number of light turnwrest ploughs, (I mean considerably lighter, and of more simple construction, than the common Kent plough, though called Kent ploughs here, and considered heavy) to work, but without wrests (or mould-boards) or coulters, with shares from 12 to 27 inches broad, according to the strength and state of the land as to weeds, always taking care that the shares worked under all the roots of twitch, by which means the land was completely broken and the roots raised so near the top as to be got out by scarifiers and harrows; but my favourite implement for that purpose is what is called a shake drag in Nottinghamshire. It is a strong harrow with fixed handles, and teeth projecting forward, so as to work the land effectually, but not too heavy for a man to lift with ease.

The broad-sharcings and dressings were repeated where necessary: the season being favourable, part of the land was limed the last dressing, and the whole left well water-furrowed (the land being strong and inclined to wet,) till the latter end of January or beginning of February, when as much of the remainder was manured as my stock would permit, which was carted on when the land was frozen so as to bear the carts: as soon afterwards as possible it was ploughed with a turn-wrest plough (with wrests) which when well done turn the manure quite under, to such a depth as not to be brought near the surface by drilling or horse-hoeing the beans, or the strength exhausted by evaporation. My beans, which are early, and productive, were drilled 20 inches between the rows (which I prefer to 24, as recommend by Mr. Rhodes, for there is sufficient room for the horse to walk without injuring them, the horse-hoe works nearer the rows, and the land is sooner shaded from the sun;) the beans were horse-hoed three times, and hand-hoed twice, and well earthed up with a plate fixed to the horse-hoe the last time. The beans were cut before the leaves were off (which is earlier than is common in this neighbourhood,) to increase the value of the straw for fodder for my horses, and laid down in quarter sheaves across the rows till properly withered, then tied and stacked (or shocked) in rows as wide apart as convenient, and the land between the rows broadshared immediately, harrowed, and the bean roots, &c. burnt or taken clean off; and as soon as the beans were carried or moved, the remainder of the land was cleaned in the same way.

By the above means the land was cleared of twitch, and at the proper season ploughed deep enough to bring up all the manure, sowed or drilled with wheat, and managed as to water furrowing, &c. (which I am very particular about) in the way I described in the letter I have referred you to. The horse-hoes pulverize a sufficient quantity of the soil for the wheat to take root in, and the bottom being well ploughed up, leaves a surface covered with small clods, which is useful to the wheat in the winter and spring, and which prevents the land running together, as is often the case after summer fallows*. I have often known it after beans, when it has not been ploughed sufficiently deep. I do not hesitate to say, that land managed as above will be in a much better state to produce a full crop of wheat than if it had been summer fallowed.

The land I found in summer fallow, clover lay and turnips, was sown with wheat, and cleaned, after the next harvest, in the way I have before described: ever since, my farm has been kept clean without much difficulty.

Half my land grows wheat every year: the crops have not diminished, but increased in quantity and quality. About half of the other grows beans, one fourth clover, and the remainder potatoes and early tares, with which I use a considerable quantity of clover for soiling my horses, feeding, and other cattle, to increase the quantity and quality of my manure. I also grow turnips after tares for the same purpose, and always cart out manure upon mould or scrapings of roads and cover it up to prevent waste, till it is wanted; it is then turned and used for potatoes, tares, or laid on for beans, as I have before described. I have found the turnwrest ploughs, used in the way I cleaned my land, preferable to any other implement in fallowing for turnips, or when land is required to be got clean and fine in a short time: if used with a share not too broad (say 12 inches) particularly the first time, the land may be worked effectually, if not very stiff, with two horses, to a sufficient depth, the earth raised and broken without turning up a stiff bottom (which is generally the case when ploughed in the common way, and which the sun bakes so hard as to prevent its being sufficiently pulverized afterwards;) the moisture is preserved in the land, so as to promote the growth of the seeds of weeds, while working, and the turnip seed when sown. The roots of couch are not cut, and are left on the top exposed to the sun, and got off with ease, which would not be the case if ploughed with a common plough; and the land may be worked to a greater depth, and more effectually destroys coltsfoot, thistles, and other weeds, than scarifiers.

I fear I have extended this to too great a length; if so, cut it down as much as you think proper.

I am Sir,
Your obedient servant,
THOS. WRIGHT.

The intelligent writer of the above is the brother-in-law of Mr. Champion, the breeder of the fine stock lately imported by the Editor of this paper, and sold to Col. Lloyd. Mr. Wright is now in this country with a view to Agricultural observation and settlement as a farmer, and stock breeder. His tour will be limited, chiefly to the western parts of Pennsylvania and New York; from such of our subscribers and friends as he happens to meet with, the Editor requests in his behalf, the favor of those attentions and hints in the way of his business, as cannot fail to prove alike useful and grateful to a stranger seeking a place of settlement in a foreign country.

Editor Am. Farmer.

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* *This is a very just remark: soils that are apt to puddle or be rendered spuey with rains, ought not to be pulverised too fine before sowing.*

Edit. Farmers' Journal.

FROM THE VERMONT REPUBLICAN AND YEOMAN.

THE FARMER...No. I.

Sheep.—Since the manufacture of cloth has become an object of primary importance, any attempt to improve its quality, and of course, its value, cannot but receive the cordial assent, not only of every farmer, but of every one friendly to the real independence of his country. Perhaps, in no point, have the true interests of our country been more prejudiced, than in the inundating influx of foreign cloths. Perhaps the progress of national independence, in no individual instance, has been more retarded, than in the strong partiality for cloths of a foreign fabric. In order to manufacture cloth in this country, that will successfully compete with foreign fabrics, nothing is more wanting than requisite attention to the preliminary steps in the process.

As the season for washing and shearing sheep has now arrived, and as the quality and value of the cloth depends much upon the manner in which these are accomplished, permit me to recommend to the farmers of Windsor County, the practice I have adopted and pursued for a series of years. Experience testifies to its superior excellence. I take a hogshead, tub or potash kettle, and place it immediately in the vicinity of the stream, where I propose to wash my sheep. I then heat water and make a strong soap suds, as hot as the hand can conveniently bear. Then let two men take the sheep, one at a time, and emerse them completely, except the head, in this suds, and keep them in a minute or two, until the wool becomes saturated with it. The sheep are then taken immediately into the stream, and the wool at once assumes the beauty and whiteness of cotton. This process is not only simple, but expeditious. I then turn my sheep into a clean pasture, where they will have no opportunity of getting into the dirt, and thus injure their fleeces. If the weather is fair, I usually permit an interval of about three days between washing and shearing. Though the wool will dry in two, yet four days are necessary to restore to it the natural oil and moisture from the sheep, which conduces so much to its advantage.

Shearing, the next step in the process, demands more attention than is ordinarily devoted to it. The shearer should be extremely cautious that he does not *cut the wool but once.* He should in no instance mend his clip, but should keep the shep in such a position, that the skin may be smooth, and thus enable him to cut the wool close and even. It may always be observed, that the extremities of the wool of yearling sheep that have never been shorn, are much coarser than towards the body. The best method to be adopted in such cases that I know of, is, for the shearer to clip the ends before the sheep is shorn.

After the fleeces are off, I proceed to cull and sort the wool, with the utmost care and attention; as every thing depends upon a proper division of the wool, in the manufacture of the best cloth. My method in making these divisions has usually been the following: I take from my best sheep about one fourth of the fleece, viz: from the shoulders as far back as the ribs extend, and generally half way down the sides. This I call No. 1, and lay it in a clean place on the scaffold, where it cannot be injured by the fowls or chaff. For No. 2, I take a strip of wool farther towards the neck, down the sides and towards the hips, and place it with the best part of the wool from my second best sheep, and so continue until I have made about eight divisions, having reference to the length and quality. This I consider about the proper number of sorts to be culled, in lots of sheep generally. Too much discrimination cannot be exercised in making these divisions, as a small quantity of coarse wool, mixed with fine selections, will materially diminish the value of the cloth.

After my sheep are shorn, I take about six pounds of butter, six ounces of tobacco, one pint of tar, and two ounces of sulphur, or in this ratio, and put them into a kettle over a small fire, stirring it frequently for about one hour. I then take it off and let it cool until I can bear my hand in it. Then with a cloth dipt in this composition, I rub the sheep and lambs thoroughly. This process will be found extremely salutary in preventing the sheep from taking cold, as the oil and tar will keep the dews and rains from penetrating so much to the skin. It also hastens the growth of the wool, and the ensuing year it will be found to have increased the size and fineness of the fleeces. Without this application, the sun will for a long time scorch the hides of the sheep, and by closing the pores, thus destroy the genial influence of the natural oil and moisture, so necessary to the rapid growth of the wool. The tobacco is added to destroy the ticks, which it effects in a few minutes after the application is made.—The object of the sulphur is to prevent dogs and wild animals from molesting the flock, which effect it will have for a long time.

As cleansing the wool, *before* it is taken off, is much less expensive, it is also much better. If cleansed *after*, it extracts the oil so necessary to be retained, and the wool becomes more harsh, and less capable of making good cloth.

If I should be deemed minute in my details, my apology must be found in the importance of the subjects.

AMERICAN GRASS BONNET MANUFACTORY.

It affords us unfeigned pleasure to give our readers the following intelligence from the Hartford Times; and we sincerely hope the ingenious and industrious ladies who deserve so much praise for their efforts hitherto, will meet with every facility in their new enterprise, which a liberal public should bestow, and an ample reward in its complete success:

We are gratified to perceive by an advertisement in our paper this week, that an establishment is about to be commenced in Wethersfield, for manufacturing *Grass Bonnets and Hats*, and is intended to be carried on to a considerable extent. Mrs. Sophia Wells, who is to have the principal superintendance of the establishment is the lady whose ingenuity first wrought this kind of bonnets, and who has been voted for one of her efforts, a valuable Medal from the royal Society of Arts in London, and was offered a handsome premium in money on condition that she should furnish the Society with a sample or description of the grass, and an account of the mode of preparing and manufacturing it, with which condition, we understand, she has not complied. She has also obtained a patent for the invention. The other young ladies who are to act as superintendants, have we believe received premiums for grass bonnets from the Agricultural Society of this county. It must give satisfaction to every person to witness this attempt to emulate an ingenious and elegant foreign manufacture, the importation of which has drawn vast sums of money from our country; especially as it is founded upon female skill and industry. There is no doubt that grass bonnets and hats can be manufactured equal in quality and beauty to any Leghorns imported, and if they can be afforded as cheap, they will have a preference, and thence be an essential benefit to the country in retaining its species and promoting its industry. We hope that this *experiment* will succeed, and that others in different parts of the country will engage in similar enterprises.

FROM THE BERKSHIRE STAR.

AGRICULTURAL MEMORANDA.

In Saxony, the Shepherds have no fixed wages; but are allowed a profit on the produce of flocks. From the adoption of this arrangement the sheep owners derive great advantage, as the shepherds have no inducement to deceive them, but on the contrary are interested in taking care of the flock.

How far this practice is feasible in our country, it would be rash to assert; it is however worthy of investigation and perhaps of trial.

The juice of carrots, added to cream in Winter, will give the butter made therefrom, the flavor and appearance of that made in Summer.—[Feeding the cows with carrots is better.]

A table spoonful of unslacked lime, given to Horses, regularly with their water or food, for 3 or 4 days, night and morning, will completely expel the Bots.

Water in which Potatoes have been boiled, it is said, will protect cabbages, turnips and vines, from the ravages of flies and bugs.

It is a safe maxim, that grain *should never be sown* but when the ground is *laid down* to grass, or ploughed *from it*.

It is remarked by Sir John Sinclair, that neither wheat or rye straw should be given to *Mules*, as it disagrees with them, and will render them unfit for labour.

To insure a good supply of manure for the ensuing year, profit of every favourable opportunity to draw bog and swamp earth into the Barn Yard.

"*Prevention is better than cure.*"

"GAPES."

Take a piece of assafœtida about the size of a hen's egg; beat it tolerably flat; then wrap a piece of cotton cloth round it, and nail it to the bottom of the trough where they are daily watered: this method is to be adapted in the spring of the year, when the hens begin to bring forth their young broods, and it will be attended with invaluable success in preventing that destructive disorder. "RUSTICUS."

Extract of a letter to the Editor, dated SPARTA, *Geo.* 28*th May*, 1822.

"Our corn and cotton crops look pretty well—the latter is always planted in drills, in my settlement from three to five feet apart, according to the richness of the land, and left from six to ten inches apart, one stalk in a place—the drill system with the former is making its way with deep ploughing, and for this purpose we use generally Wood's patent and the Deagan ploughs. This is the only plan, in my opinion, to restore our lands, that have so much suffered by the wretched system pursued here. Prejudice is wearing away, and improvement begins to appear. I enclose you a few seed brought here by some of our Africans from the lower districts of South Carolina:—they are thought to be the *Ochra* seed—please inform me if I am right in my conjecture."

☞ The seed sent by our correspondent are the *Ochra*, and is considered when ripe and roasted the best substitute for coffee, and when cut up and boiled in the green state with the pods, with a small quantity of meat, makes a very rich fine soup.

THE FARMER.

BALTIMORE, FRIDAY, JUNE 14, 1822.

☞ As we are aware, from enquiries that have been made, that many will be disappointed in not seeing the official account of the last Cattle Show in this No. of the Farmer—and as many people erroneously suppose it to be the duty of the Editor to prepare it, we are in a manner forced to explain, that that duty is committed by the Society to much abler hands. It would no doubt have been performed before now in the most satisfactory manner, if Mr. Howard had not been unavoidably called away to New York, before the close of the exhibition; and we doubt not he will avail himself of the first leisure moment to connect all the details, and we shall be happy to present as soon as we can obtain it, the report of the whole proceedings.

BAKEWELL, OR DISHLEY, OR NEW LEICESTER SHEEP.

Those who have been hitherto disappointed, and others who may now desire to procure a few of this valuable race of sheep, may now be supplied, on making early application to the Editor of the "American Farmer."

☞ For sale a thorough bred bull two years old, of the celebrated Holderness or milk breed—from an imported sire and dam, both of which have taken the highest prizes given at the Brighton Cattle Shows. He is a very superior animal, and may be had for less than it would cost to *transport* one from England to this country. The Editor can with the utmost confidence recommend him to any friend desirous of improving his stock in their *milking* properties, without sacrificing size, shape, or quality of flesh.

PRICE CURRENT—CORRECTED WEEKLY.

Flour from the wagons, $6 75—Wharf ditto sales have been made at $6 50 cts. cash—Best white Wheat fit for bakers flour $1 50 cts.—Common white 140 to 145 cts.—Red 138 to 140 cts.—White corn 80 cts.—Yellow 76 to 78 cts.—Rye 70 cts.—Oats 40 to 45 cts.—Bran per bushel, 15 to 17 cts.—Shorts, do. 20 to 22 cts.—Plaster of Paris per ton, $3 50 cts.—Shad, No. 1, trimmed $8—No. 2 do. $7—No. 1, untrimmed, $7—No. 2, do. $6—Herrings No. 1, $2 75 to $2 87½ cts.—No. 2, do. $2 50 to $2 62½—Whiskey 33 to 34 cents—Soal Leather per lb. 25 to 27 cts.—Skirting, ditto 30 to 23 cents.—Upper whole side, $3 to $4 25 cents—Candles mould per lb. 15 to 17 cts.—Dipped, do. 13 to 14 cts.—Spermaceti, 35 cts.—Beef, fresh, per lb. 8 to 12½ cts.—Pork, 6 to 9 cts.—Veal, per lb. 6 to 10 cts.—Mutton per lb. 6 to 8 cts.—Lard per lb. 12 cts.—Butter per lb. 31 to 37½ cts—Cheese per lb. 12 cts.—Eggs, per dozen, 12½ cts.—Hickory wood $4 50 to $5—Oak, do. $3 to 3 50—Pine, do $2 25 to $3.—Tar, North Carolina, $2 25—Rosin, $2 25—White pine boards per M. $10 to $30—Bees' wax, per lb. 37½ to 40 cts.—Salt, Liverpool coarse, per bushel 50 to 55 cts.—Turks Island, 65 to 70—St. Ubes, per bushel, 53 to 55.

MARYLAND TOBACCO—raised by Charles M'Elfresh sold for the following prices:—2 hhds. yellow, $25—2 do. spangle, $15—1 do. see'd. $5—1 yellow, $32—1 do $26—By P. M'Elfresh, 1 old ground $14—4 at $8—1 second, $4.—

VIRGINIA TOBACCO—a few hhds. sold for $6 25 to $8 50—no sales of Kentucky.

PUBLISHED BY JOHN S. SKINNER.

HORTICULTURE.

POMARIUM BRITANNICUM,

An Historical and Botanical account of Fruits, known in Great Britain, by Henry Philips.—Second Edition.

INTRODUCTION.

It is now universally allowed, that no country ever attained to such eminence, either in commerce or the arts, as the British nation has at present.

As the mind has become more enlightened, the taste of course has become more pure; whence it is no wonder that man in this island has now so much directed his attention to an employment which the Almighty deemed best adapted for his happiness in the creation of the world: "And the Lord took the man, and put him into the garden of Eden, to dress it, and to keep it."

No people of old, in their greatest prosperity, ever ceased to cultivate and honour this useful pursuit, which, far from being considered a mean and vulgar study, commanded the attention of kings themselves. Of Solomon it is written, that "he made cedars to be as the sycamore trees that are in the vale for abundance," and that he wrote a history of all the plants, from the cedar of Libanus to the moss growing on the wall.

The chinese have ever been celebrated for their attention to horticultural pursuits. A peasant, whose garden or fields are cultivated with the most care, is rewarded by being made a mandarian of his class.

Among the Persians, horticulture was most strictly attended to, if we may trust the authority of Xenophon, who states that Cyrus the Younger was accustomed to inform himself, whether the private gardens of his subjects were well kept, and yielded a plenty of fruit; that he rewarded the superintendants or overseers whose provinces were the best cultivated; and punished those who did not labour, and improve their grounds. I will not here omit the just compliment of Lysander to this monarch, who was telling him that many of the trees they were looking at had been planted by himself. The Lacedæmonian, observed "That the world had reason to extol the happiness of Cyrus, whose virtue was as eminent as his fortune, and who in the midst of the greatest affluence, splendour, and magnificence, had yet preserved a taste so pure, and so conformable to right reason."

Socrates makes this noble encomium upon agriculture: "It is," says he, "an employment the most worthy of the application of man, the most ancient, and the most suitable to his nature; it is the common nurse of all persons, in every age and condition of life; it is the source of health, strength, plenty, riches, and of a thousand sober delights and honest pleasures; it is the mistress and school of sobriety, temperance, justice, religion, and in short of all virtues, both civil and military."

To prove in what estimation among the ancients they were held who encouraged or improved this art, it will be only necessary to attend to what is stated by Plutarch, who says that Ceres and Bacchus were mortals that were deified for having given to men immortal blessings, by bestowing on them the knowledge of raising fruits. At Rome especially, during the Commonwealth, the greatest generals, consuls, and dictators, with the same victorious hands that overthrew the enemies of their state in war, turned up the earth in time of peace.

Pompey and Vespasian bore in their triumphs trees which they had procured from the conquered nations, as monuments more durable and useful than those of brass or marble; and long before their time, after the sacking of Carthage, the Senate reserved from the libraries of that great city only twenty-eight volumes, (the writings of Mago on Husbandry,) which they caused to be translated into the Latin language, notwithstanding Cato had so lately written on the same subject.

As soon as they had in some sort made themselves masters of Britain, the Romans began to clear the forests, and encourage agriculture, which in this country was but little attended to, except upon the coast; and at that period the island possessed but few fruits, which for want of proper culture must have been very inferior in quality.

As the Romans made a practice of conveying to their native country the natural productions of the conquered nations, and cultivating them with such care as to make them flourish as though indigenous to the climate, it is probable that, after the fall of their empire, the Crusaders, who often made that part of the world a rendezvous, observed and acquired a relish for many of those rarities, and brought back to their homes, not only new fruits, but those of their native soil in an improved state. After this, the intercourse of the priests with Rome perhaps served to introduce other fruits, as the Catholic religion, enjoying frequent abstinence from animal food, must have made the possession of fruits more desirable.

But it was during the reigns of Henry the Eighth, and Elizabeth, that the most valuable fruits were introduced into this country, for at that time the desire of discovery pervading England, many fruits, plants, and vegetables, hitherto unknown, were brought to this island from the new world. At that period so little does horticulture seem to have advanced, that Elizabeth was obliged to procure her salads from Holland; and, according to Fuller, green pease were seldom seen except from that country. "These," says he, "were dainties for ladies—they came so far and cost so dear."

About the commencement of the seventeenth century, Tusser, Gerard, Bacon, and others, turned their attention to natural history and the cultivation of useful and ornamental plants. After them, Linnæus altering and enlarging the foundation upon which former naturalists had built, raised that system which will remain as long as science, time, and natural productions shall last.

Since this, there has been kept up a continued search for every kind of tree, shrub, and herb, that could either please the eye, gratify the taste, or contribute to the advantage of medicine; the hottest and the coldest climates have been explored: and those plants that, for want of a warmer sun, would not flourish naturally in this country, have had an artificial clime and temperature furnished to them. Our cottage walls are now covered with the roses of China; our gardens with the flowers of Persia; and even the woods ornamented with the spiral blossoms of the Asiatic chesnut: in short, the various plants of all the world have been introduced to beautify our happy land; and with such success, as render it difficult sometimes to say, which are natives, and which are not.

The Agricultural Society has succeeded in improving our farms, the very meadows of which are clothed anew: this produces the grass of the Italian fields, and that the pasture of the Netherlands: the chalky hills wave with corn, our marshes are no longer stagnated, and famine, which formerly succeeded an unfavourable season, seems no longer to be dreaded.

The Horticultural Society was established in the year 1809, in order to give further encouragement to this art, and to extend the best possible system of it to every part of the kingdom. By means of this company, what is discovered in one place, may be sent post as it were to others, through the remotest corners of the dominions, without travelling as before, by ages. Besides this advantage, individuals have sent out men of science to every quarter of the known world in search of plants, which have since been so diversified and multiplied, as to make it almost difficult to discover more varieties.

The author has ascertained, by the assistance of the Hortus Kewensis, that since the discovery of the new world, we have produced 2,345 varieties of trees and plants from America, and upwards of 1,700 from the Cape of Good Hope, in addition to many thousands which have been brought from China, the East Indies, New Holland, various parts of Africa, Asia, and Europe, until the list of plants now cultivated in this country exceeds 120,000 varieties.

But flowers have principally engaged the care and study of students in horticulture and botany, while fruits have been in comparison rather too much neglected, though of the two the latter are intrinsically the most valuable, for since the more frequent use of fruits and vegetables in this country, many dreadful diseases, as the leprosy, &c. are no longer prevalent, or have lost their baneful effects.

Induced by these reflections, the author endeavoured to discover to whom we are indebted for such comforts and advantages; in doing which, he met with considerable difficulty, for modern historians are silent on the subject, though they often dwell long on others not really so interesting; and the few works in our language on this head, are either too expensive or strictly botanical for general readers. However, encouraged by the observation of Sir Joseph Banks, that "Every anecdote that tends to throw light on the introduction, or on the probable origin of plants now collected for use, is interesting, even though it is not quite perfect," he continued his researches till he was flattered that the work, originally intended only as a private instruction for his family, might, with care, become worthy the perusal of the public, and enable him to make further inquiries and discoveries, which has emboldened him to send it forth to the world.

It has been the compiler's wish and endeavour to render the work a History of Fruits, that may not only be read through, but referred to, with some amusement; in it to blend entertainment with useful information, as much as the subject would allow; to combine and compare the accounts of the ancients with those of the moderns which are more improved; and, in short, to treat on each species of fruit generally; for to have descended into varieties, would have filled volumes with names alone, since he finds one individual possessing 400 kinds of strawberries, and others as great a variety of gooseberries, while the kinds of apples, pears, plums, &c. have been still more numerously multiplied.

And kinds are less material to *his* theme;
Which who would learn, as soon may tell the
sands
Driv'n by the western wind on Lybian lands,
Or number, when the blust'ring Eurus roars,
The billows beating on Ionian shores.

Dryden's Virgil.

AMUSEMENTS OF THE TURF.

To the Editor—Sir, I have always been of opinion that nothing would so much contribute to preserve for us a fine race of Horses, as the keeping up on *a respectable footing*, the amusements of the turf. They have been lately revived under the most promising circumstances in New York presided over and regulated by gentlemen of the highest respectability in that state. There was some talk here lately about following their example, amongst gentlemen who are alone able and capable of taking the lead on such occasions, and I hope it will not be abandoned. Some object, on the score of the gambling and dissipation which ensues, but it is not fair to argue from the rational use to the abuse of things, else we might with equal justice decry every species of amusement and recreation whatever. On that principle we had better all turn hermits at once, and seeking gloomy caverns and clear springs, live on blackberries and cold water for fear of being contaminated by the vices of society or enervated by the luxuries of civilization! It is only requisite that the thing should be taken in hand by *gentlemen* who have leisure and taste, and be sanctioned by the name of some one long known, and every where respected for the urbanity of his manners, his hospitality and high character as a fair and liberal sportsman,* and success would be the sure and speedy result; we should have thousands coming from every quarter to spend their superfluous money in our neighborhood, and how much better would that be than sucking your paws and moping and growling about hard times, like surly bears. What put it into my head to send you this scrawl, was reading in the London Sporting Magazine of April last, the following

COMPARISON

Of the NUMBER *of* RACES, *and* AMOUNT *of* SUMS WON *at* NEWMARKET: *of the* NUMBER *of* RACE COURSES, *and of* COVERING STALLIONS, *advertised between* 1779 *and* 1819: REMARKS *on the late* TROTTING MATCHES.

To the Editor of the Sporting Magazine.

SIR,

Says the author of the "Philosopical and Practical Treatise on Horses," published in 1796, in the chapter "On Running Horses,"—"The sage lucrubations of our closet jockeys, which occasionally make their appearance in the daily prints, are in the following strain:—'When the turf has sunk into that contempt it merits, we shall again have that race of strong boney horses to which our forefathers were accustomed; the old English hunter will again rear his crest.'—Precisely so, in part, it would no doubt be; and we should again jog on after the sober rate of half a dozen miles per hour, upon that marble-breasted sort, which old Bracken dignified with the name of "pioneer horses;" and again might we make a long day of travelling fifty miles in a stage coach. So much for the strong boney horses of our grandsires. Respecting the old English hunter, so highly in favour of these reforming jockeys he was always a half-bred horse, and how would they contrive to make such an one, without the help of racing blood? With paragraphs of the above tendency, may be classed those congenial ones, which, at least during every unfortunate period of war and distress, announce the decline of the turf, and forbode with exultation its approaching ruin. It was nothing uncommon in regular and authentic prophesying times, for two prophets, equally well bred, to predict clean contrary things; and I will be bold to foretell the INCREASE, instead of the decline, of horse-racing. Never were so many bred stallions kept in England, as at present: never was Newmarket better attended, than at the late meetings."

Let us see how correctly this last soothsayer has prophesied, by a Newmarket comparison of the two dates 1779 and 1819, of which, his date 1796 is not, indeed, quite a medium—a circumstance of no great importance, presuming, however, that, in essentials, the period between 1769, and 1789, was one of the most flourishing ever known in England or Europe, including France, which can be named, either before or since; and in no particular to a greater degree, than in the high character of the horses, whether for racing, or for every useful purpose of the stud, the field, or the road: for within that period flourished Squirrel, Bay Malton, Eclipse, Goldfinder, Bellario, Pumpkin, Mambrino, Mark Antony, Gimcrack, Shark, Masquerade, the Rocket Gelding, Magog, Woodpecker, Potatoes, Imperator, King Fergus, Rockingham, Phenomenon, Sir Peter,—a list, whether as racers or stallions, it would not be easy to match at any other period.

Newmarket Craven Meeting, March 22, 1779; Stakes won by Woodpecker, 16 starting—four sweepstakes, in amount 860gs.; three matches, 150gs.—In all 1010gs.

Newmarket Craven Meeting, April 12 to 17, 1819: Won by Cannon Ball, 20 starting—twenty-two sweepstakes, 13,990gs.; two fifties, and 13 matches, 3010gs.—The whole, 17,000gs.

First Spring Meeting, April 5, 1779: Sixteen sweepstakes, 8675 guineas; five plates, 350gs.; 30 matches, (two quarter, and one half-mile match,) 7355gs.—In all, 16,380 guineas. Seventeen of these races were over the B. C., six over the R. C., and one over D. C.

First Spring Meeting, April 26, 1819: Fourteen sweepstakes, 7215 guineas; four plates, 300 guineas; nine matches 2000gs.—In all, 9515gs. Of these races, only two were over the B. C., and three only of three miles each.

Second Spring Meeting, April 26, 1779; Total of money won, 8048gs.

Second Spring Meeting, May 10, 1819: Total of money won, 1620gs.

Total of money won in the three Spring Meetings, 1779: 25,438gs.

Ditto, ditto. 1819: 28,135gs.

July Meeting (the 6th,) 1779: money won, 2785gs. July Meeting (the 12th,) 1819, 1980gs.

First October Meeting (the 4th) 1799: money won, 8311gs. Second Meeting, October 18: won 5545gs:—Total in both, 13,856gs.

First October Meeting, (the 4th,) 1819: money won, 370 lgs. Second Meeting, October 18: won, 5796gs.—Total in both meetings, 9497gs.

General total of money won at Newmarket, in 1779—32,079gs.

Ditto, ditto, in 1819—39,612gs.

Race courses in England, 1779, *eighty-five*—in Scotland two—in Ireland, thirteen.

Race courses in England, 1819, *eighty-nine*—in Scotland, *eight*—in Ireland, *five*, *six* meetings being annually held between March and November on the Curragh of Kildare. In 1779, only four meetings on the Curragh.

Number of covering stallions for the turf in 1779, *sixty-three* native, *one* Barb, *one* Arabian, and Chillaby, an Oriental horse, country unknown.

Number in 1820, *ninety-four*, among which there appear no foreign horses.

The observations which naturally occur are as follows: in the first place, the prophet who foretold the increase, *vice* the decline of horse racing, comes in first and first, beating the whole field of his prophetic brethren in a canter. The extremes both of short an long races, seem to have been abandoned. We seldom or never, at present, hear of quarter or half-mile matches, and those of six or seven miles, had been out of vogue long before the earliest of the two periods specified. Even racers over the B. C. or R. C. at Newmarket, or indeed four-mile races any where, now seldom occur, comparatively with the custom, of 1779, and the earlier periods.—The late Sir C. Bunbury was materially instrumental in the introduction of short races, for which he had, probably, various motives. This perhaps may be connected with the late custom of breeding large leggy horses up to the height of full seventeen hands; a form, it may be averred, in general, more likely to produce speed than stoutness. But after all, there cannot be a more solid motive in any view than breeding *useful* horses, and such as will serve as stallions for other purposes beside that of the turf; and more especially on account of the uncertainty of the stud, the best racers, full often, proving of no use whatever in getting racing stock; and further on the consideration that fifteen hands one half, or sixteen hands at most, may include, and perhaps, with greater certainty, every desired quality of speed, stoutness, or of ability to carry weight, as has indeeed been exemplified in the list already given. Hence perhaps, the sod of the B. C. might, with real use, be more trodden than of late years it has been. It must nevertheless be impartially stated, that during the latter period, the character of the British thorough bred horse has continued to rise upon the continent and in our Asiatic Empire, and the export is far greater than in former times, and the prices high in proportion.

From the generally large size of racers, give and take plates have been long since almost exploded, and crossing and jostling races have been equally long out of vogue: this last, not prematurely, for certain, since it was a relic of barbarism even among our true and high bred sportsmen; but of the low bred kind or leather-plate jockies, within memory of the present writer, it was most abominably savage, the riders cutting out their competitors' eyes, or knocking out their teeth with their whip handles! It is to be taken for granted that crossing is abolished, since in a match the old appendage, *no crossing*, never appears.

Currency on the turf, as well as at the Bank, is also shortly about to be changed, and guineas to be metamorphosed into pounds, as previously and advantageously plates had been ready melted into purses. As to the speed of the English race-horse, that ascribed to Flying Childers, namely, a mile in one minute, is only traditionary; such a trial and performance never having been recorded; and the only authentic account with the stop-watch, and the greatest performance on record, is of the match between Firetail by Squirrel, and Pumpkin by Match'em, 8st. each, the R. Mile for 500gs. in the First Spring Meeting, 1773.—This mile was run in *one minute, four seconds and half.* Squirrel was got by Old Traveller, and was both the speediest and stoutest horse of his day, and got remarkably speedy stock. He appeared the shortest legged racer that we have seen. The covering price was reduced during the latter part of the first period, and subsequently, the capital horses being allowed a greater number of mares.

From *tollutation* to *succussation*, the digression is mighty easy and natural, as when the horse is dead beat at a gallop, he naturally falls into a trot. That is to say,

——"Whether *tollutation*,
At they do term't, or *succussation*."

HUDIBRAS.

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* *Such an one may be found not far from G** Street.*

Trotting, during many years, declined in this country, the high prices of the war having induced the Norfolk and Ely farmers to pay more attention to growing wheat, than breeding trotting horses. The trotting rage has revived, as it appears from the circumstance of several horses of this description being imported from the United States of America. In that country, both trotters and amblers have been long much in request, and with respect to the former, the Americans have been always bold enough, in discourse, to challenge all England.—It has been now, for the first time, brought to the test of English and stop watch trial, but not with any proof of that superiority so confidently assumed by the American jockies. In fact, in all the late matches, whether with respect to the American or present English race of trotters, there has been full as much cry as wool. Not an individual of them has been found able to trot a mile in *three minutes*, a very clear indication that, as they say at Newmarket, we have trained off, in the trotting way; and from long disuse, we have nothing now to compare with the trotters of former days. The mare Phenomena was a stout and lasting trotter, but speed was not her play; the great things she did, were in consequence of light weight, always carrying a feather, and trotting over a bowling green. She never could carry weight, and was repeatedly beaten for speed, on the road. So much has been said on the subject of capital trotters of former times, in the *Sporting Magazine*, that a repetition at present would be superfluous: suffice it to say that, about two or three years before Mr. Aldridge trotted his match, an account of which was some time since given in these pages, there were at least half a dozen known trotters in and near the metropolis, which actually trotted the mile, a considerable number of seconds under three minutes, not jockied by a feather and over a selected course, but carrying their owners over the common road. There were several in Norfolk also capable of this performance. They would start and trot the *first* mile off hand, under three minutes. I speak as an eye witness, and from a number of trials which I rode. What would the two best of these horses have done with a good rider of seven stone, over Sunbury? I really believe *twenty* miles in one hour; with respect to nineteen, I have not the shadow of a doubt.

The accounts we have had in the public papers, of the mode in which some of these trotters have been ridden, are of the rum, or rather queer kind. The nags perpetually breaking into a gallop, and of all things, one of them trotting the last half mile in, whipped and spurred! I think Mr. Albridge must smile at this new fashioned way of managing and riding a trotter.—However, if the game goes on, we may hope for some improvement both in trotting and jockeyship. A BIT OF A JOCKEY.

ENGLISH NEWSPAPERS.

FROM THE DEMOCRATIC PRESS.

A friend has put into my possession, and authorised me freely to use, for publication, a *manuscript* volume, containing some very interesting facts, touching the establishment and mode of conducting nearly all the daily papers in London. The volume is written by a gentleman who, for nearly thirty years, was engaged in the literary department of some of the London Journals. We had supposed we had some knowledge of the subjects of which this volume treats, yet we are free to confess that some of the facts have excited no inconsiderable admiration in our minds.

None of the London editors give *credit* to subscribers. Those papers which are served in *London*, are *weekly* paid for by the news carriers, who receive subscribers, and are allowed by the editors a certain profit. The *country* subscribers all pay in *advance*, and the *very day* their subscription expires, their names are stricken off the books, unless care has been taken to forward the necessary advance for another year or half year, as the case may be. The editors of papers in the United States are paid in a very different manner, and the consequence is, that they neither can incur the same expense, nor hope to realise the same profits as the editors, or rather the proprietors, of the London papers. Few papers in London are owned by the person who acts as editor. Many of them are divided into shares, and owned by a considerable number of proprietors, who, in proportion to their share, bear their proportion of the expenditures and receive their proportion of the profits.

In the British empire, as well as in the United States, the main profit of a newspaper is derived from its advertising customers. *The Times*, formerly a ministerial, but now an antiministerial paper, is one of the most expensive newspaper establishments in the United Kingdom, or in the world. The regular *literary* establishment of that paper is: an editor, at 10 guineas (46 dollars 70 cents) per week; an assistant editor at 6 guineas ($28) per week; and eleven reporters at 5 guineas ($23 33 cts.) per week, each. The duty of those reporters is to report Parliamentary debates, law proceedings, discussions at the India House, Common Council, Livery of London, and at all other public meetings. Some of those gentlemen are occasionally sent to report important trials and proceedings of public meetings in the most distant parts of the kingdom. Thus the *regular* expense of the *literary* department of this paper is 71 guineas ($331 33 cts.) a week, or three thousand six hundred and ninety-two guineas ($17,229 33 cts.) a year, independent of travelling expenses, &c. &c.

The other expenses we do not exactly know, but they may be inferred from the following facts. Each paper has a stamp, which costs three pence halfpenny (6 cts.) The salary of the proof reader is three guineas ($14) a week. The compositors' wages are twenty-four guineas ($112) a week. The paper is printed by means of a steam engine press, which is constantly attended by a regular mechanician. When to these we add the cost of the *paper*, ink, house rent, clerk hire, &c.; still we have not embraced all the expenses of this great establishment. There is a confidential agent constantly employed about the Exchange to obtain commercial information, and procure extracts of letters received by the merchants from their foreign correspondents. These extracts are purchased sometimes at very high prices. Domestic occurrences, such as the proceedings of the police offices, at coroners' inquests, boxing matches, races, fashionable routs and assemblies, court intelligence, and a nameless detail of minor occurrences, which make up the miscellany of a London newspaper, are furnished by a detached body of irregulars, who furnish their contributions at a certain rate per quantum. They are not paid unless their contributions are accepted for publication. These irregulars pick up from two to eight guineas a week, according to their industry, their talents, and their opportunities. Estimating the expense of this department of the Times at but nine guineas ($42) a week, it makes the weekly expenses of the establishment, exclusive of the whole printing department, 80 guineas ($373 33 cents) a week, or four thousand one hundred and sixty guineas ($19,413 33 cents) a year.

At the time our informant wrote, the daily sale of the Times averaged 8,000 papers. We have before said the price of the stamp is three pence halfpenny, therefore, the *daily* stamp tax on the times was equal to $518 53 cts., or allowing 313 publishing days in the year, the stamp duty paid in that time by the proprietors of the Times was *one hundred and sixty two thousand two hundred and ninety six dollars and thirty cents.* The amount of stamp tax is altogether independent of the tax which is paid for advertisements, which must be very great, as no advertisement, however short, is inserted without paying five shillings (60 cents) duty to the government.

To shew the extra expence incurred on important occasions, we shall state a few facts from the manuscript before us. During the war with France, gentlemen were sent from the Times office, to report the operations of the British armies on the continent. At Walcheren, at the bombardment of Boulogne, and on other occasions, the Times almost invariably anticipated the Government despatches, sometimes by days and even sometimes by weeks.

This was particularly the case at Walcheren for many successive weeks. When operations ceased there, and the British army was ordered to re-embark, the Times newspaper published the *final* account of the proceedings *three weeks* before it was in the Government Gazette, and then the Gazette scrupled not to copy two whole columns from the Times of three weeks before. An Irish gentleman named Hogan, who died about five years after at Sierra Leone, where he filled the office of chief justice, was the Times' correspondent at Walcheren. He had a regular attendant, who waited for his daily despatch, and immediately sailed with it in a fast sailing cutter. So soon as it touched the English coast, the despatch was handed over to a courier, conveyed by blood-horse expresses to London, and the news appeared in the Times the day next but one after the event had happened. Walcheren is an Island of one of the Dutch provinces, of which Middleburg is the capital. We will resume this subject.

From Silliman's Journal of Sciences and Arts.

CASES OF DELIRIUM.

Facts illustrative of the Powers and opertions of the Human Mind in a Diseased State.

Some years ago a farmer of fair character, who resided in an interior town in New-England, sold his farm, with an intention of purchasing another in a different town. His mind was naturally of a melancholy cast. Shortly after the sale of his farm, he was induced to believe that he had sold it for less than its value. This persuasion brought on dissatisfaction and evidently a considerable degree of melancholy. In this situation, one of his neighbours engaged him to inclose a lot of land, with a post and rail fence, which he was to commence making the next day. At the time appointed he went in the field, and began with a beetle and wedges to split the timber out of which the posts and rails were to be prepared. On finishing his day's work, he put his beetle and wedges into a hollow tree, and went home.—Two of his sons had been at work through the day in a distant part of the same field. On his return he directed them to get up early the next morning, to assist him in making the fence. In the course of the evening he became delirious, and continued in this situation several years; when his mental powers were suddenly restored. The first question which he asked after the return of his reason, was whether his sons had brought in the beetle and wedges. He appeared to be wholly unconscious of the time that had elapsed from the commencement of his delirium. His sons, apprehensive that any explanation might induce a return of his disease, simply replied that they had been unable to find them. He immediately rose from his bed, went into the field where he had been at work a number of years before, and found the wedges, and the rings of the beetle, where he had left them, the beetle itself having mouldered away. During his delirium his mind had not been occupied with those subjects with which it was conversant in health.

Mrs. Smith, an intelligent lady, belonging to a respectable family in New York, some years ago undertook a piece of fine needle work. She devoted her time to it almost constantly, for a number of days. Before she had accomplished it, she became suddenly delirious. In this state, without experiencing any abatement of her disease, she continued for about seven years, when her reason was suddenly restored. One of the first questions she asked after her reason returned, related to her needle-work. It is a remarkable fact, that during the long continuance of her delirium, she said nothing, so far as was recollected, about her needle-work, nor concerning any such subjects as usually occupied her attention when in health.

A lady in New-England, of a respectable family, was for a considerable period subject to paroxysms of delirium. These paroxysms came on instantaneously, and after continuing an indefinite time, went off as suddenly, leaving her mind perfectly rational. It often happened that when she was engaged in rational and interesting conversation, she would stop short in the midst of it, and become in a moment entirely delirious, and commence a conversation on some other subject, not having the remotest connexion with the preceding one, nor would she advert to that during her delirium. When she became rational again, she would pursue the same conversation in which she had been engaged during the lucid interval, beginning where she had left off.—To such a degree was this carried, that she would complete an unfinished story, or sentence, or word. When her next delirious paroxysm came on, she would continue the conversation which she had been pursuing in her preceding paroxysm ; so that she appeared as a person might be supposed to be who had two souls, each occasionally dormant, and occasionally active, and utterly ignorant of what the other was doing.

FROM THE DEMOCRATIC PRESS.

SOAP SUDS A MANURE.

A few years ago my attention was attracted by the soil of my garden, reduced to a state of poverty unfriendly to vegetation.—Interest in all its future produce, influenced my wishes for its restoration. An invigorating manure was necessary; but such a stimulus could not easily be procured.—While considering which of the succedanea within my reach, had the greatest probable appearance of succeeding, it occurred, that possibly some trivial advantage might be derived from the oil and alkali suspended in the waters of a washing. Pits were immediately ordered to be made, and in them, the contents of a tub, which my servant usually committed to the common sewer, were carefully deposited ; as washing succeeded washing, other pits were dug and filled, so that the whole garden, a small portion excepted, has in this manner been watered and enriched ; that small portion remains a visible demonstration of the utility of this manure. There vegetation is still languid ; while the rest of the garden, invigorated by the suds only, annually exhibits a luxuriance almost equal to any thing this fertile neighbourhood can produce.

Remarks on the above by the Rev. Thomas Falconer.

1. The above important experiment may perhaps, remind the reader of the principle ingredients of the oil compost, suggested by Dr. Hunter of York. In this simple fluid manure, we have an animal oil, and the same alkali, but neither of them, perhaps, in so pure a state as in the manure, with the addition of fresh horse dung. The fresh horse dung is added in order to produce heat and fermentation ; and a delay of six months is supposed to be necessary, to make the compost fit for use. All, however, that seems to be gained by the horse dung, is the animal oil, which may be united by the alkali during the progress of fermentation, and the straw, which in the fermentation of the compost will bind the mass together, and when decomposed on the ground, will afford a small supply of vegetable matter. If we make the comparison strictly accurate on the other side, we may observe, that in the fluid manure there must be an increased quantity of animal matter in the water, after it has been used for the purpose of washing linen.

The experiment then shews what is the advantage of the application of the oil and alkali only, as a manure, and perhaps the delay of 6 months in preparing the compost would not be compensated by any superior efficacy, that may be expected to arise from the combination of the horse dung. It also appears from the experiment, that the compost is a more useful discovery than Dr. Hunter himself could justly infer from his own limited experience of its effects.

2. This mixture of an oil and an alkali has been more generally known than adopted, as a remedy against the insects which infest wall fruit trees. It will destroy the insects which have already formed their nests and bred amongst their leaves. When used in the early part of the year, it seems to prevent the insects from settling upon them ; but whether by rendering the surface of the leaf disagreecable to the bodies of the animals, and thus repelling them, or neutralizing the acid they deposit, and thus preventing the leaf from contracting into a necessary form for their reception, I cannot presume to determine.—One of the modes by which this mixture indirectly contributes to the fertility of the ground, may be by its destruction of the insects, which prey upon the plants. It is also, I think, to be preferred to the lime water, as the wood ashes and lime, which Mr. Forsyth recommends to be used for the removal of insects. It is preferable to the lime water and the lime, because lime loses its causticity, and with that its efficacy, by exposure to air, and must consequently be frequently applied ; and to the dredging the leaves with the fine dust of wood ashes and lime, because the same effect is produced by the mixture without the same labour, and is obtained without expense.

Mr. Speechley, in his treatise on the vine, published 1796, has used this mixture with great success ; but he has applied it awkwardly and wastefully. He directs it to be poured from a ladder out of a watering pot over both trees and wall, beginning at the top of the vale, and bringing it on in courses from top to bottom. Mr. Speechley is not the first person who has thought of this application of the mixture. It is a fact which has been long known and neglected.

A considerable extent of wall may be washed by means of a common garden pump in a short time ; and this operation should be repeated as often as a supply of a mixture can be procured ; or if the water of a washing cannot be had, a quantity of potash of commerce dissolved in water may be substituted. The washing of the trees and wall twice a week for three weeks in the spring will be sufficient to secure them from the injuries of these insects. On the whole then, this must be considered as a vluable manure, as it can be obtained easily, at small expense, and in large quantities ; and when its nature is well understood, will probably be no less esteemed, by the farmer than horse dung.—To the gardener as well as the farmer, it is useful mixed with mould as a fertilizing compost ; or when fluid may be applied to his fruit walls as a wash fatal to the noxious brood of predatory insects. NICHOLSON'S JOUR. V. 20.

Remarks of a Countryman.

The discovery of Soap Suds as a manure, is worthy of the consideration of agriculturists generally. In addition to the applications of oil, pointed out by Mr. Falconer, I have used it with some success in the preservation of cucumber vines from the bugs which are detrimental to them. I also think that water and muskmellon vines might be preserved from the bugs by a timely application of Suds. The advantages of it are not sufficiently known. Future experiments I am disposed to believe will stamp a value on it far beyond what we at present conceive or anticipate.

A COUNTRYMAN.

FROM THF RALEIGH REGISTER.

In your last paper I saw a cure for the Botts, or as they are commonly called the Grubs, in Horses. It may be very correct ; but having learnt from the late Mr Craven, of this city, a much more simple, and perhaps as effectual a cure, I offer it for publication. He stated, that on a visit to Edenton, he could not procure for his horse any other food than cut oats. The horse having been accustomed to be fed on corn and fodder, he feared that he would not be able to support himself on cut oats. A few days after he arrived, the hostler requested him to go to the stable. When there, he found his horse had passed a large quantity of grub worms, and every day while he stayed, he continued to pass them in a reduced quantity, so that he believed that his horse was preserved by this excellent food.

POOR RICHARD.

N. B. Western wagoners, who are in the habit of feeding their horses on cut rye straw and meal, say they seldom die of the botts.

The late Austin Curtis, of Halifax, who was known as the first horse keeper in the state, asserted that human urine was the most certain remedy to remove grubs—by drenching with urine, and after some time giving a strong purgative.

FISH.

The Philadelphians have adopted the mode of despatching vessels to the Capes of the Delaware, for the purpose of procuring fish, which are to have their entrails and gills extracted, and then packed in ice, in which state they are deprived of the blood, which answers all the purposes of crimping ; for it is owing to the coagulated blood remaining in the fish, with the other parts, which deprives them of that sweetness and firmness, which they otherwise would have.

OFFICIAL PAPER,

Accompanying the Report of the Committee of Ways and Means to the House of Representatives, April 30, 1822.

A statement shewing the annual amount of the total estimated receipts into the Treasury, and of the total actual receipts from 1802 to 1821, inclusive; and shewing particularly the amount estimated, and the amount actually received from customs.

YEAR.	TOTAL RECEIPTS. Estimated.	TOTAL RECEIPTS. Actual.	DIFFERENCE.	REC'TS FROM CUSTOMS. Estimated	REC'TS FROM CUSTOMS. Actual.	DIFFERENCE
1802	10,600,000	13,668,233 95	Act. rect's .29 more than est'd rec'ts.	9,500,000	12,438,235 74	Act. rec'ts .31 more than est. rec'ts.
1803	10,000,000	11,064,097 63	Do. .11 more do.	9,600,000	10,479,417 61	Do. .09 more do.
1804	10,400,000	11,826,307 38	Do. .14 more do.	10,000,000	11,098,565 33	Do. .11 more do.
1805	11,750,000	13,560,693 20	Do. .15 more do.	11,280,000	12,936,487 04	Do. .15 more do.
1806	13,500,000	15,559,931 07	Do. .15 more do.	13,000,000	14,667,698 17	Do. .13 more do.
1807	14,500,000	16,398,019 26	Do. .13 more do.	14,000,000	15,845,521 61	Do. .13 more do.
1808	15,800,000	17,060,661 93	Do. .08 more do.	15,000,000	16,363,550 58	Do. .07 more do.
1809	10,500,000	7,773,473 12	Do. .26 less do.	10,000,000	7,296,020 58	Do. .27 less do.
1810	10,300,000	9,384,214 28	Do. .09 less do.	9,800,000	8,583,309 31	Do. .12 less do.
1811	12,500,000	14,423,529 09	Do. .15 more do.	11,500,000	13,313,222 73	Do. .16 more do.
1812	8,200,000	9,801,132 76	Do. .19 more do.	7,500,000	8,958,777 53	Do. .19 more do.
1813	12,000,000	14,340,409 95	Do. .19 more do.	11,500,000	13,224,623 25	Do. .15 more do.
1814	10,100,000	11,181,625 16	Do. .11 more do.	6,000,000	5,998,772 08	Do. almost equal do.
1815	18,200,000	15,696,916 82	Do. .14 less do.	6,500,000	7,282,942 22	Do. .12 more do.
1816	33,400,000	47,676,985 66	Do. .43 more do.	21,000,000	36,306,874 88	Do. .73 more do.
1817	30,650,000	32,896,623 44	Do. .07 more do.	24,000,000	26,283,348 49	Do. .10 more do.
1818	24,525,000	*21,060,171 04	Do. .14 less do.	20,000,000	17,176,385 00	Do. .14 less do.
1819	24,220,000	24,559,617 16	Do. .01 more do.	21,000,000	20,283,608 76	Do. .03 less do.
1820	22,500,000	17,840,669 55	Do. .20 less do.	19,000,000	15,005,612 15	Do. .21 less do.
1821	16,050,000	†14,573,703 72	Do. .09 less do.	14,000,000	13,004,447 15	Do. .07 less do.

If these twenty years be divided into four series, of five years each, it will appear that the actual receipts have either exceeded or fallen short of the estimated receipts in the following proportions:

In the first series, viz: 1802 to 1806, inclusive, 84 parts in 500, or 17 per cent; and, in the customs, 79 parts in 500, or 16 per cent.

In the 2d series, viz.: 1817 to 1818, inclusive. 71 parts in 500, or 14 per cent.; and, in the customs, 75 parts in 500, or 15 per cent.

In the 3d series, viz: 1812 to 1816, inclusive, 106 parts in 500 or 21 per cent; and, in tho customs 119 parts in 500, or 24 per cent.

In the 4th series, viz: 1817 to 1821, inclusive, 51 parts to 500, or 10 per cent; and in the customs, 55 parts in 500, or 11 per cent.

The difference between the estimates and receipts is less during the last five years than during any series of five years embraced in this statement.

From the year 1802 to 1813, inclusive, the estimates were made by Mr. Gallatin.

From the year 1814 to 1846, inclusive, the estimates were made by Mr. Dallas.

From the year 1817 to 1820 inclusive, the estimates were made by Mr. Crawford.

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Selections from late numbers of the London Farmers' Journal, received at the office of the American Farmer.

QUERIES ON BARKING FRUIT TREES, AND ON IMPROVING GRASS LAND.

Bromyard, May 8, 1821.

Sir,

I beg to inquire, through the medium of your valuable Journal, whether any of your correspondents can communicate a detail of the experiment tried in Scotland on *barking fruit trees.*—Sir John Sinclair, in his excellent "Code of Agriculture," page 438, mentions that "Mr. P. Lyon, of Comely Garden, near Edinburgh, has tried the experiment on above 800 fruit trees, both young and old, and with great success." I should be glad to learn whether any account of this experiment has been published, and where it is to be procured? Or if no such publication has taken place, perhaps some of your correspondents would be kind enough to state *the mode in which the experiment was conducted*; on *what kinds of fruit trees*; at *what season* of the year; and what now (or lately) appears to have been *the effect?*

Your Journal of April 2d contains a letter signed *J. S.* and dated *Hereford, March* 16th, "on the improvement of Grass Land;" in which the writer states, that he has effected great improvements in his grass lands, so much so as to double their produce. Do me the favour to mention, in your next Journal, whether you are at liberty to communicate the address of *J. S.* As an inhabitant and occupier of land in the same county from whence his letter is dated, I should be glad to profit by his instruction; and if he do not forbid the visit, should be happy to inspect his improvements. I remain, Sir,

Your obedient servant,

W. G. C.

☞ We know the address of *J. S.* who is a very respectable gentleman, and we doubt not that the correspondence will produce an agreeable eclaircissment. The experiment on fruit trees we have tried, but we conceive that several preliminaries are necessary to be stated, or understood, before any useful information can be derived. First, if the soil be good (including depth of bottom,) and the trees be healthy *(i. e.)* free from *canker* and moss, or nearly so, we conceive that to *bark* them, as meant, would be hazardous; perhaps not merely useless, but mischievous in the end. But, secondly, if trees be unhealthy, owing to the nature of the subsoil, it is worth the risk to make experiments. It must be a case of the latter kind which Sir John Sinclair has referred to, and it was our own case in the experiments above alluded to: the trees were cankered and mossy, and bore mean fruit. The outer bark was removed, by carefully slicing it downwards, any time during the early part of winter, taking care not to go too deep, but to take off all the outside to the *sap green*. The effect was, that the ensuing season the fruit was larger and more perfect, and earlier ripened. (The whole trunk and main branches were done.) In the orchard, two ribstone pippin trees stood contiguous; the first year only one was operated upon, and the superiority of the fruit was very striking. The second year the other was done, and the same effect followed; but the first tree was the worse for the barking, got rapidly weaker in growth, and has been headed down. The second tree was less cankered, and bore a fair crop two years afterwards; how it will go on remains to be proved. The operation was tried upon a golden pippin, which had been headed down two years before, and this it almost killed; it was also tried upon a very healthy cherry-tree, which was quite spoiled by it. Thus far our experience has gone, and we shall be glad to hear from Mr. P. Lyon, of Comely Garden, as a further report of the effect to be expected.

Editor Farmers' Journal.

QUERY ON THE DESTRUCTION OF MICE.

Northamptonshire, May 10, 1821.

Sir,

If any of your readers know of a safe and effectual remedy to destroy Mice in a wheat hovel, and will be good enough to communicate the same, they will confer a favour on me, and I have no doubt, many others of your friends. My hovels stand upon proper frames, to prevent their getting up. In former times we were not troubled as we are now with these destructive little animals.

I remain, Sir, &c.

A. N. F.

ON ROADS AND WHEELS.

☞ We have received a letter containing some very sensible corrections applicable to the letter printed in our last, from the author; but having, for brevity's sake, made some variations from the original, they became unnecessary. Our able correspondent proceeds at considerable length, and with great ingenuity, to argue against the cylindrical wheels, both as to their strength and pressure (the latter on curved roads must necessarily be on the two inner edges when going in the centre, and on one inner and one outer edge when going on the side.) But as he goes principally on the supposition that the cylindrical wheels are to be *enforced*, we conceive it is not necessary to state his reasoning at large. He concludes his very able letter with the following experiment:—

"Since my last, I have had a cone and cylinder wheel made as follows: a circular piece of board four inches diameter for the naves; six spokes (six inches long for each wheel) of wire (No. 14.) and iron hooping from the same piece, for the rims. The cone I laid down with its outside upon a table, and placed upon the nave 1 lb. weight, which did not settle it down one tenth of an inch. I then laid the cylinder, supported on its rims, on a table, and [illegible] half a pound on the nave, and could but just perceive the difference; but when I placed one pound, it very evidently settled more down than that which had the 10lb.; the weight upon the cylinder was then in part supported by the hanging of the spokes from the rim, which must have a tendency to make them beceme ricketty: the spokes and rim of the cone were acted upon just the reverse.—This experiment will, perhaps, speak best for itself, and I hope will be a means of preventing the poor farmers from being driven to an expensive and useless experiment."

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* *In consequence of the law repealing the "internal duties." this source of revenue, which was estimated at $2,500,000, produced only $[illegible]5,270 20.*

[illegible] *consequence of the law for the relief of the [illegible] of "public lands," the proceeds of th[illegible] [illegible]blic lands, which were estimated at $[illegible] amounted only to $1,212,96646.*

I remain, your's &c.

A Common Leicestershire Farmer.

PEDESTRIANISM.

Rainer, the Kentish pedestrian, started on Thursday, on the Woodford road, to perform his undertaking of fifty miles in seven hours and a half, for a considerable bet. He went off well, and was backed at odds to win, but he was beat at thirty-six miles; he kept on the whole time, when he was four miles from home, and lost the match.

Match to Walk Twelve Miles in Two Hours.

This was a match for 100 guineas, for Mr. West, the pedestrian, to walk the above distance in the stated time. It was done over a two-mile piece of turf, at Chillingfield, near Barnet, about the time of Rainer's match, and the distance was accomplished in fifty-nine minutes forty-seven seconds. The pedestrian is nearly forty years of age, and his manner of walking is very true, there not being more than eight seconds difference in each of his miles. Time was backed at five and six to four.

Tandem Driving.—A match was driven on Wednesday on the Lewisham road, for one hundred guineas, by Mr. Gwilt, a dealer, who undertook to trot two horses in tandem thirteen miles in one hour, and to wait three minutes if either horse broke into a gallop. The horses did the first three miles in some seconds over twelve minutes, when the leader broke from the trot, and half the distance was performed in thirty minutes and thirty seconds. The driver was going on at the rate of a mile in four minutes and fifteen seconds, when the wheel-horse broke into a gallop in the eleventh mile, and the match was given up as lost.

We are sorry to see from a paper laid on the table of the House of Commons, the progressive decline of the value of manufactured woolen goods and woolen yarn. For one year, to the 5th January 1819,

The total declared value was -	£9,047,960	19	11
To the 5th Jan. 1820 - - - - - -	6,899,694	6	5
To 5th Jan. 1821 - - - - - - - -	6,279,164	12	11

It appears by the papers presented to the House of Commons respecting the Penitentiary at Milbank (ordered to be printed March 15,) that there are now 551 prisoners in that prison, the net expense of whose maintenance has been £14,880. 3s. 6d. for last year, which is £26. 17s. per head. This is about half a guinea a week for the board-wages of these worthy servants of the public. But the lodging of these gentry is paid for at a much more extravagant rate. The sum of £400,000, has been already expended on the building of this prison; which sum divided by 551, gives about £722, a piece as the sum paid for the erection of the residence of each of these persons. A man who builds a house generally gets 10 per cent. for his money, which would make the house-rent merely, for each of the prisoners, £72. 2s. a year; so that altogether they cost more per head than the junior clerks in public offices, and about four times as much as well-paid labourers with families in most counties in England.

SECOND CATTLE SHOW,

Held by the Board of Agriculture of Great Britain.

We must confess that we take particular pleasure in giving the following account of the second Cattle Show held by the English Board of Agriculture—we say the second, for although the Board itself was long since founded by that great agricultural luminary, Sir John Sinclair; and incalculable benefits have flowed from its labours in collecting and disseminating useful information, yet it was not until last year that it first got up an *Agricultural Exhibition*, and the second was held on the 22d and 23d of April *last*.

The reader will perceive that the prize of a piece of plate valued at 30 pounds sterling, and another valued at 20 pounds, were both awarded to our worthy friend Charles Champion, Esq., for the *best* bull and cow of the "*Improved Short horn*" breed, and we take leave to remind him that the bull Champion, and heifers White Rose, and Shepherdess, exhibited by the Editor at the late Maryland Cattle Show—were of this same stock, and procured from Mr. Champion. Hence it may be fairly presumed that we have put the country in possession of the very best of that breed in England, and in its greatest perfection. It will be observed that the Editor of the London Farmer's Journal,—a gentleman of great ability of indefatigable industry and of much practical observation, remarks as to Mr. Champion's bull "we cannot but say he was by far the most *complete* and handsome animal of his kind we have ever seen;" and we know that Mr. Holdich has been in the habit of attending the great agricultural exhibition at Holkham, and doubtless at many other places.

We have inserted a few of the toasts of the most general character given on the occasion, omitting those of a personal or local cast with the speeches of members, interesting, no doubt where they were delivered, but deriving that interest chiefly from political considerations of local origin and existence.

Editor Am. Farmer.

BOARD OF AGRICULTURE'S CATTLE SHOW.

This interesting exhibition took place in Aldridge's Yard, Little St. Martin's-lane, Westminster, on Monday, and Tuesday last. The Show was highly creditable and satisfactory, and many first-rate Breeders contributed their stock on the occasion. It is a very pleasing and instructive sight, when gentlemen from various parts of the kingdom have the opportunity of seeing some of the best animals in all the celebrated breeds, and the public is much indebted to the exhibitors. For our own part, we had never, before these shows were instituted, seen any specimens of the best *Short-horned* and *Hereford* Bulls, nor any breeding Cows of the improved Short-horn breed: the sight was altogether extremely gratifying.

We should be happy to enumerate all the objects, with some observations on such as struck us more particularly; but this, standing on our individual judgment, might be imprudent; besides which, many of the pens were without labels, and we should therefore, perforce, omit some animals which ought, in all reason, to be commended. The expression of just praise may very well be supposed to be embodied in the decision of the Judges, whose award gave the highest satisfaction to the company. The Judges were—Mr. Ellman, sen. of Glynd, near Lewes; Mr. Joseph Russell, late of Warwickshire; and Mr. Paul Bright, of Handley, Derbyshire.

Among the company in the Yard, we observed his Grace the Duke of Norfolk; Lord Althorp; the Earl of Egremont; Sir Charles Morgan, Bart.; C. C. Western, Esq. M. P., J. C. Curwen, Esq. M. P.,. C. M. Cheere, Esq. M. P., Davies Gilbert, Esq. M. P., John Fane, Esq. M. P., C. T. Tower, Esq., W. Childe, Esq., J. R. Smythies, Esq., Wm. Green, Esq., John Ellman, sen. Esq., W. B. Thomas, Esq., Charles Champion, Esq. Wm. Lambe, Esq., J. W. Allen, Esq. &c. &c. The company, though not very numerous, was highly respectable.

The number of animals exhibited were eleven bulls, seven cows, two heifers, six steers, twenty rams, thirty-five ewes, and six lambs; three tegs, eight boars, and twelve sows.

Mr. Gibbs, the seedsman to the Board, shewed some choice specimens of red and yellow Mangel Wurtzel.

THE DINNER.

At five o'clock on Monday, about 40 gentlemen sat down to an excellent dinner at the Freemansons' Tavern; the Right Hon. the Earl of Macclesfield (President) in the Chair. After the cloth was drawn, the noble Chairman gave, "The King,"—"The Royal Family,"—"Success to Agriculture." According to the arrangement of the business, the Secretary, Mr. Geo. Webb Hall, then rose, and read the adjudication of the premiums, as follows:—

Mr. Charles Champion, of Blyth, Notts, a piece of plate value £30, for the best bull of the Durham (or short-horned) breed, named Aide-de-Camp, aged 22 months.

The Rev. George Jenyns, of Bottisham Hall, Cambridgeshire, a piece of plate value £30, for the best bull of the Hereford breed, five years old. Mr. John Putland, of Willingdon, Sussex, a piece of plate value £30, for the best bull of the Sussex breed, two years old; no competition.

Charles Callis Western, Esq. of Felix Hall, Essex, a piece of plate value £30, for the best bull of the Devon breed, five years old.

Mr. Charles Champion, a piece of plate value £20, for the best breeding cow of the Durham (or short-horned) breed.

Mr. John Putland, a piece of plate value £20, for the best breeding cow of the Sussex breed.

Mr. John Walker, of Westington, Herefordshire, a piece of plate value £20, for the best breeding cow of the Herefordshire breed.

Charles C. Western, Esq. a piece of plate value £20, for the best breeding Heifer of the Devonshire breed.

Mr. Henry Boys, of Salmstone, Kent, a piece of plate value £15, for the best ram of the Southdown (or short-wooled) breed.

Charles C. Western, Esq. a piece of plate value £15, for the best ram of the Merino (or fine-wooled) breed.

Mr. Humphrey Tuckwell, of Signett, Oxfordshire, a piece of plate value £15, for the best ram of the Cotswold (or long-wooled) breed.

Mr. Stephen Grantham, of Stoneham, Sussex, a piece of plate value £15, for the best pen of Southdown Ewes.

For three pens of Merino ewe tegs, belonging respectively to the Marquis of Londonderry, John Fane, Esq., and C. C. Western, Esq., an honorary premium of £10 each.

Charles C. Western, Esq. a piece of plate value, £10, for exhibiting the best boar, of his peculiar breed.

Mr. George Dodd, of Chenies, Bucks, a ditto, for ditto.

Mr. John Putland, a ditto, for ditto.

Mr. Stephen Grantham, a ditto, for ditto.

Mr. Stephen Grantham, a piece of plate value £10, for exhibiting the best breeding sow, of his peculiar breed.

Charles C. Western, Esq. a ditto, for ditto.

Mr. George Dodd, a ditto, for ditto.

Mr. Wm. Cawston, of Broadwater, Herts, a ditto for ditto.

Mr. George Dodd, a piece of plate value £30, for exhibiting the best steer, or young ox, of the short-horned breed.

Mr. John Walker, a piece of plate value £20, for the best steer, of the Herefordshire breed.

Mr. John Putland, a piece of plate value £15, for the best steer, of the Sussex breed, in working condition.

The reading of the awards being finished, the noble Chairman delivered the premiums to the respective candidates, with his accustomed urbanity, making suitable observations, and giving appropriate praise to each class of animals. He then gave, "The Judges," and thanks to them for the trouble they had taken, and for their able and judicious decisions. Mr. Bright returned thanks, for himself and his colleagues.

"The successful Exhibitors of stock," with three times three.—Mr. Putland returned thanks for the fortunate competitors: for himself he was perfectly satisfied with the decision of the Judges. (These observations excited some merriment, Mr. P. having obtained no less than four premiums.)

"The unsuccessful candidates, with thanks to them for sending stock." The noble Chairman accompanied this toast with saying that the only way to get a premium, was by continuing to send stock to such exhibitions; knowledge and judgment were obtained, and emulation excited; and success generally was the reward.

Mr. Cawston, jun. returned thanks. He said there could be no feeling of disappointment where every one was satisfied; perseverance seldom failed of its object; and he should for one not despair; but he rose more particularly to propose the health of Sir John Sebright, whose absence he much regretted; to him he was indebted for the origin of the stock he had shewn this day (Merinos,) and every one knew how pre-eminently successful at public exhibitions had that stock been in his (Mr. C.'s) father's hands. He would take the liberty of adding that Sir John was a most liberal and excellent landlord. The toast was drank with three times three, and every mark of affection and respect.

"Success to the Fleece and the Flail,"

"Breeding in all its branches."

Many other toasts were drank, and the company broke up about 11 o'clock.

We have to add that the dinner being on Monday, the attendance of company at the Show on Tuesday was so small, that the doors were closed at an early hour.

Mr. Champion's bull 22 months old, weighed by Mr. Pickford's machine, gave 16 cwt. 2 qrs. and 3 lbs. Of this bull we cannot but say he was *by far the most complete and handsome animal of his kind we have ever seen.* He is called *Aid-de-Camp*, and was got by Warrior; dam by *Charles;* g. dam Miss Colling, by Prince; g. g. dam by Comet. Mr. C.'s prize cow, was Miss Colling, now 10 yeas old, and has bred eight calves; she was got by Prince, and her dam by Comet. She is a pale red cow, having a very wide, level and beautiful carcase, with a handsome, good sized and well shaped bag. Mr. Putland's Sussex breed was very much admired. Mr. Western's Devons also had singular merit; as had likewise the Herefordshire stock.

We believe there was some pig stock from C. T. Tower, Esq. but we could not ascertain them from a want of labels.

Editor of the Farmers' Journal.

The following statement, showing the classes and professions of the Members of the 17th Congress, from the several states, has been prepared with considerable care, by a member from Ohio, and it is believed to be very nearly, if not quite accurate. [*American Republic.*

STATES . .	*Lawyers* . .	*Farmers* . .	*Physicians* . .	*Merchants* . .	*Manufacturers*	*Printers* . .	*Clergy* . . .	TOTAL . . .
Maine, ...	4	1	0	1	0	0	1	7
New Hampshire, . .	3	1	1	1	0	0	0	6
Massachusetts, . . .	9	1	2	1	0	0	o	13
Rhode Island, ...	1	0	0	1	0	0	0	2
Connecticut, ...	4	0	0	2	0	0	1	7
Vermont, ...	5	1	0	0	0	0	0	6
New York	16	7	0	1	3	0	0	27
New Jersey, ...	1	1	4	0	0	0	0	6
Pennsylvania, ...	9	10	2	1	0	1	0	23
Delaware, ...	2	0	0	0	0	0	0	2
Maryland, ...	4	3	1	1	0	0	0	9
Virginia, ...	10	9	3	1	0	0	0	23
North Carolina, . . .	4	7	1	0	0	0	1	13
South Carolina, ...	3	6	0	0	0	0	0	9
Georgia, ...	3	2	1	0	0	0	0	6
Kentucky	8	2	0	0	0	0	0	10
Tennessee, ...	3	2	0	1	0	0	0	6
Ohio, ...	2	1	0	2	0	1	0	6
Louisiana, ...	1	0	0	0	0	0	0	1
Indiana, ...	1	0	0	0	0	0	0	1
Illinois, ...	1	0	0	0	0	0	0	1
Mississippi, ...	1	0	0	0	0	0	0	1
Alabama, ...	1	0	0	0	0	0	0	1
Missouri, ...	1	0	0	0	0	0	0	1
	97	54	15	13	3	2	3	187

Territories.

Michigan	1
Arkansas, ...	1
	99

The Members were born in the states and countries following:

In Virginia, ...	37
Pennsylvania . .	27
Connecticut, . . .	27
Massachusetts, .	23
North Carolina, .	13
New York, . . .	12
Maryland, ...	10
New Jersey, . . .	8
South Carolina, .	8
New Hampshire,	5
Carried over, . . .	170
Brought over, . . .	170
In Georgia, ...	4
Kentucky, . . .	4
Rhode Island, .	2
Delaware, . . .	2
Tennessee, . . .	1
Maine, ...	2
Ireland, ...	2
Bermuda, ...	1
Total, ...	189

FOR THE AMERICAN FARMER.

SUBSTRATUM PLOUGHS.

Notwithstanding I have a host of eminent Farmers against me, at the head of whom stands the respectable President of our Agricultural Society; to whom I am indebted for the origin of my plough, who prefers two coulters to three, I do most strenuously contend that three coulters are necessary to constitute a complete substratum plough; at the same time I am willing to admit that two coulters having broad feet, may pulverize the earth sufficiently, yet three will do it rather better, and they being made in the common way, will require sharpening or repairing less frequently. I ploughed 25 acres with mine, this spring, and believe I can plough 25 more, before it will want repairing. As to the draft requisite to work it, I can with confidence assert that I found no difficulty in working it from 6 to 10 inches deep, with two horses, (I do not now work the horses as I did prior to my first letter on the subject, but work them abreast of each other,) and I am fully satisfied that there are, at least, 10 horses on the farms which I superintend, either one of which would work my plough 7 inches deep, and follow a barshare that would complete one acre per day; the labor would perhaps be too much, for more than one day, but I know they could do it for that period at least, in my substratum that I have to till.

With Mr. Cocke, the want of a sufficient number of teams, may form an objection to a full tillage of this kind, but I am generally able to command any number of teams, that I may stand in need of. On emergencies, I resort to a greater number of oxen than I generally use, always having young cattle suitable, on the farms, and I have in one instance, made an excellent worker of a strong cow that was almost useless as a milker. My object is to economize human labour, and if I cannot spare horses, a yoke of good oxen will work my plough, and keep at the heels of the horses in the barshare before them, which will be less expensive than a single horse in a single coulter plough, as each must have a driver or ploughman.

Your's &c.
JOSEPH DELAPLANE.

TO THE EDITOR OF THE AMERICAN FARMER.

ON TRANSPLANTING YOUNG CEDARS.

Sir,

The most eligible season for removing and transplanting the red cedar, is any time between the months of September and June.

To insure their succeeding, it is necessary after the holes are ready for the reception of the young trees to prepare a sufficiency of earth which must be well mixed or puddled with water, about the consistency of thick paint. The holes must be filled with this mixture before the trees are introduced, that it may settle and completely cover the roots. The earth that is removed in digging the holes, if rich, will answer, if otherwise, good loam ought to be procured. The trees will grow amazingly fast if good soil is used. This useful tree for hedges has always succeeded with me when planted in this manner, and I am sure "A Subscriber" will meet with success if he will be governed by my experience. He must be careful that the roots do not become dry by exposure to the sun or drying winds before planting, as they are very susceptible of injury, and ought to be well guarded if removed to any distance.

I am, Sir,
Your humble serv't,
R.

June 9, 1822.

Editor's Correspondence

Columbia, S. C. June 5th, 1822.

MILLET.

J. S. Skinner, Esq.

Dear Sir,—I have duly received your letter of the 24th ult. including two seeds of the Tea Plant for which I am much obliged to you, and I assure you that if they come up, they will be well taken care of.

I send you here enclosed a few seeds of a kind of Millet which I distinguish by the name of Egyptian Millet, although I may be mistaken as to its native country. Its value, however, I doubt not; and from a table spoonful of the seed I brought from France with me, I have been able to give away enough to plant many acres. It was my intention to send you some of it earlier than this, but having neglected to send by a favourable opportunity, I thought of putting it off till next winter, when I shall send you a quantity for distribution among your agricultural friends.—The plant grows about fifteen feet high, bears from ten to forty stalks from each seed, the ears are from eighteen inches to three feet long; but what I think its most valuable quality, is that it will like Guinea Grass, bear 4, 5, or 6 cuttings in the summer, and that horses and cattle are very fond of it; I know of no better plant for soiling. It is doubtful whether the seed enclosed can bear seed this fall, the season being so far advanced; but I beg you will have it planted nevertheless, as I shall send you a plenty of it in time for next year. Being a very large plant, it ought to be planted about the same distance as Indian corn, and only one plant left in each hill; at least there is no advantage in leaving more as it fills the ground well in good land. I presume that what is intended for fodder might be planted closer.

I am very respectfully,
Dear, Sir,
Your obedient servant,
N. HERBEMONT.

THE HAUNCH OF VENISON.

FROM THE NEW MONTHLY MAGAZINE.

At Number One dwelt Captain Drew,
George Benson dwelt at Number Two;
(The street we'll not now mention)
The latter stunn'd the King's Bench bar,
The former, being lamed in war,
Sung small upon a pension.

Tom Blewit knew them both—than he
None deeper in the mystery
Of culinary knowledge;
From Turtle soup to Stilton cheese,
Apt student taking his degrees
In Mrs. Rundell's College.

Benson to dine invited Tom:
Proud of an invitation from
A host who "spread" so nicely,
Tom answered, ere the ink was dry,
"Extremely happy—come on Fri-
Day next, at six precisely."

Blewit, with expectation fraught,
Drove up at six, each savoury thought
Ideal turbot rich in:
But, ere he reached the winning-post,
He saw a Haunch of Venison roast
Down in the next door kitchen.

Hey! Zounds! what's this? a hauch at Drew's
I must drop in; I can't refuse;
To pass were downright treason:
To cut Ned Benson's not quite staunch;
But the provocative—a haunch!
Zounds! it's the first this season!

"Venison, thou'rt mine! I'll talk no more—"
Then rapping thrice at Benson's door,
"John, I'm in such a hurry!
Do tell your master that my aunt
Is paralytic, quite aslant,
I must be off for Surrey."

Now Tom at next door makes a din—
"Is Captain Drew at home?"—"Walk in"—
"Drew, how d'ye do?"—"What! Blewit?"
"Yes, I—you've asked me many a day,
To drop in, in a quiet way,
So now I'm come to do it."

"I am very glad you have," said Drew,
"I've nothing but an Irish stew—"
Quoth Tom (aside) "No matter,
'Twont do—my stomach's up to that,
'Twill lie by, till the lucid fat
Comes quivering on the platter."

"You see your dinner, Tom," Drew cried,
"No, but I don't though," Tom replied:
"I smok'd below,"—"What?"—"Venison—
A haunch"—"Oh! true, it is not mine;
My neighbour has some friends to dine:—
"Your neighbour! who?"—"George Benson."

"His Chimney smoked; the scene to change,
I let him have my kitchen range,
While his was newly polished;
The Venison you observed below,
Went home just half an hour ago,
I guess it's now demolished.

"Tom, why that look of doubtful dread?
Come, help yourself to salt and bread,
Don't sit with hands and knees up;
But dine for once off Irish stew,
And read the "Dog and Shadow" through,
When next you open Æsop.'

THE FARMER.

BALTIMORE, FRIDAY, JUNE 21, 1822.

☞ In this number we commence the publication of an historical account of "FRUITS KNOWN IN GREAT BRITAIN, by HENRY PHILIPS," under the persuasion that it will prove highly entertaining and useful to a great portion of our readers It is a species of reading that may be put with advantage into the hands of the *children* of our subscribers, whether sons or daughters; and there is no medium through which a benevolent mind is amused or instructed with so much gratification, as by the agency of our children. Information derived in this way is accompanied by the delightful reflection, that in the very act of acquiring it we are fostering curiosity, the main spring of mental improvement.

As the extracts will be continued through a great many of our succeeding numbers, it might be apprehended that they would become tedious were it not that the subject necessarily divides itself into *chapters*, none of which will exceed one page.

A work on the same plan has been published by the same author, on culinary *vegetables*, which we are endeavouring to procure, in the supposition that it may be used in the same way that we propose to use the one whereof we have here given the introduction.

FINE FRUIT.

☞ If it had been possible to exhibit a variety of *cherries*, received from our friend Mr. Willis, of Oxford—our readers would have seen in them, an ample justification of all we have said about his care and skill in the management of some of our most valued fruits—we regret that they were not at hand in time for our agricultural exhibition. Some were forwarded by Mr. W. to the President, as a rare specimen of improved and perfect fruit, and were truly worthy of their destination. Many farmers have *good* fruit, but these cherries show how susceptible *good* is of being made *better*, by constant and judicious attention. The time we give to such objects is never misspent, even though we may not invariably succeed. The studies and labour they require, are in themselves pleasing, and no farmer should be deterred by the occasional failures in his experiments, let them rather adopt the motto, *opere et fide*.

PRICE CURRENT—CORRECTED WEEKLY.

Flour from the wagons, $6 75—Wharf do. sales cash, same as last report, $6 50--Best white Wheat $1 50—Common white $1 40 to $1 45—Red 138 to 140 cts.—White corn 77 to 78 cts.—Yellow 75 cts —Rye 70 cts.—Oats 40 to 45 cts.—Bran per bushel, 15 to 17 cts.—Shorts, do. 20 to 22 cts.—Plaster of Paris per ton, $3 50 cts.—Shad, No. 1, trimmed $8—No. 2 do. $7—No. 1, untrimmed, $7—No. 2, do. $6—Herrings No. 1, $2 75 to $2 87½ cts.—No. 2, do. $2 50 to $2 62½—Whiskey 33 to 34 cents—Soal Leather per lb. 25 to 27 cts.—Skirting, ditto 30 to 2 cents.—Upper whole side, $3 to $4 25 cents—Candles mould per lb. 15 to 17 cts.—Dipped, do. 13 to 14 cts.—Spermaceti, 35 cts.—Beef, fresh, per lb. 8 to 12½ cts.—Pork, 6 to 9 cts.—Veal, per lb. 6 to 10 cts.—Mutton per lb. 6 to 8 cts.—Lard per lb. 12 cts.—Butter per lb. 31 to 37½ cts—Cheese per lb. 12 cts.—Eggs, per dozen, 12½ cts.—Hickory wood $4 50 to $5—Oak, do. $3 to 3 50—Pine, do $2 25 to $3.—Tar, North Carolina, $2 25—Rosin, $2 25—White pine boards per M. $10 to $30 Bees' wax, per lb. 37½ to 40 cts.—Salt, Liverpool coarse, per bushel 50 to 55 cts.—Turks Island, 65 to 70—St. Ubes, per bushel, 53 to 55.

MARYLAND TOBACCO—Fine yellow, $20 to $35—Good do. $15 to $18—Fine red and spangied, $15 to 18—Good red, $8 to $12—Common Tobacco, no demand.

VIRGINIA TOBACCO—A few hogsheads have been sold the last week for $7 to $8 50.

AUDLEY FOR SALE

I will sell the place on which I reside called AUDLEY.

This fine estate is situated in the healthy and very fertile county of Frederick in Virginia, 13 miles from Winchester, 10 from the Shannondale Springs, 55 from Alexandria, about the same distance from Washington, and 75 from Baltimore. It contains 1600 acres of first rate limestone land, about 1150 cleared, the balance covered with very heavy timber.

The improvements are a brick dwelling house containing eight rooms and a large saloon. A Barn 60 feet by 40, and all other buildings necessary for domestic comfort or convenience.

There is one mill within two miles of the farm, one within three, and two within four, the last two upon the Shenandoah river, and one of them worked by it. The river is navigable for boats during a considerable portion of the year. A line of stages running three times a week from Alexandria to Winchester, passes within fifty yards of the farm, and about three-fourths of a mile from the house. Snicker's Gap, at which point the turnpike road leading from Alexandria crosses the Blue Ridge, is distant about four miles, Battletown at which place there is a post office, and through which the stage passes on its route to Winchester is distant about 2 miles.

The proprietor confidently believes, (and in this opinion he is supported by all who have seen Audley,) that fertility of soil, and advantages of situation, render it decidedly more valuable, and more desirable than any other farm of the same size in the State of Virginia.

A more particular description is deemed unnecessary as, any person disposed to purchase will of course spend a day or two with me in examining the property. A small sum only will be required in cash, and upon the balance the purchaser upon giving satisfactory security can be indulged with a credit of six or seven years. I will give immediate attention to any inquiry by post.

WARNER WASHINGTON.

ly in the spring before the frost of winter is dissolved, fresh parsnips of a rich saccharine nature. Later in the season, but as soon as vegetation will permit, our beds of asparagus will yield a supply of one of the richest and most delicious pot herbs or greens, that our country affords—and with due care will continue that supply for a considerable time. Early in the summer, and through the autumn, we may have a sufficiency of beets, carrots, peas, and beans, and before mid-summer squashes and potatoes; and autumn will ripen the onions for use. A portion of these vegetables, as well as others not enumerated, should be preserved in the cellar for the use of the family in the winter. Though potatoes, strictly speaking, belong to the field, and should principally be raised there; yet I have assigned them a place in the garden; but I do this only for the use of the family before those in the field are ripe. In a garden the ground under fruit trees, if properly manured and carefully managed, will yield potatoes; and so far from injuring will benefit the trees, by destroying the grass and weeds, and keeping the ground open and loose. Potatoes thus raised afford an additional profit from the same land, and what is of more importance, they save the time and labour of travelling to the field to gather them for daily use.

The fruits which may be raised from vines are convenient for the family, and some of them ought to grow in every garden: such as cucumbers, melons, and grapes. The cucumber is one of the most useful, and in the heat of summer, when dressed with vinegar, salt, and pepper, is the most cooling and the most wholesome sauce that our tables afford. I am sensible that some people have a prejudice against this fruit, arising from an opinion that it is unhealthy. A long and a very free use of them has convinced me that they are salutary, and have a tendency to promote and preserve health. "Cucumbers," says the celebrated Dr. Willich, "are a wholesome, gently opening and cooling fruit which may be of considerable service to the consumptive." Melons are the richest fruit our climate yields; and grapes may be raised of a fine flavour. These vines may all be cultivated with little labour and great success, and they require but small plats of land. Our ill success proceeds from not properly manuring our land, not keeping it clean, and suffering our vines to stand too near each other. The holes in which cucumbers and melons are planted should be three feet apart, and large and deep, they should be filled nearly full with manure from the hog-stye, mixed with mould, and but few seeds put in each. The best cucumbers that I raise is from seed planted the first of June; but melons should be planted earlier.

A portion of the garden should be appropriated to the growth of fruit trees; such as pears, quinces, peaches, and plums of various kinds. The pear and the plum tree is better suited to the cold, and suffers less from it than the peach. The former should be placed to the north, and the latter to the south; the hardiest tree would then protect the tenderest against the inclemency of the season. Our climate is favourable to the growth of fruit trees, and when well cultivated they will yield a plentiful crop of delicious fruit. It is important to select trees that will yield fruit of a good quality and fine flavour. But fruit trees, as well as orchards, must be pruned, the ground manured and kept open, and the catterpillars and other insects destroyed. "It ought," says a late writer, "at the same time, to be recollected, that as the improved and most delicious fruits have come of careful cultivation, and are derived from originals of very ordinary character, so if the trees are treated with neglect, their fruit will degenerate, and in a short time be no longer cognizable as the same."

The fruit which a good garden will afford is a luxury, of which every farmer may often partake, and that with small expense—it requires the labour and care of a few hours only in the week during the season of vegetation. Such fruit of itself will make a better and more wholesome supper than roasted beef or poultry; it will make a poor dinner rich. Much of our fruit, particularly the quince, is capable of being preserved for a long time in such a manner as to vie with the sweet meats of foreign climates, which we sometimes purchase at the expense of more money than is necessary to raise the fruit in our own gardens, and to make those which are equally as good. The medicinal uses to which our fruit may be applied, and the comfort and relief they will administer to the sick, enhance their value.

But there is another species of fruit, which has not been mentioned, that ought to be raised in every garden. Currant bushes may be raised with ease, and preserved with little labour for a long period. I have never been able to raise them from the seed, though I have several times attempted it; but they may be multiplied by dividing the roots, or what is much easier by simply setting the slips into the ground.—They ought to be set in rows, each bush from three to four feet from the other, so as to admit the sun, the air, and the hoe freely between them. And if the ground is kept open, well manured, and the grass and weeds destroyed, they will yield abundantly. Their fruit is wholesome to eat—and a gelly may be made from them that is not only pleasant and agreeable to the palate and stomach, but useful in inflammation of the throat. But the most important use to which currants can in my opinion, be applied is that of making wine. Currant wine allays thirst and promotes digestion, and when carefully made and properly managed, is far superior to that which is sold for good Malaga wine. It may be made with small expense—the actual cost of it does not exceed fifty cents a gallon, at a fair price for the labour, the sugar and the brandy used in it. It requires but a small piece of land to make sufficient wine for the use of a family; my bushes usually produce fruit sufficient for more than two gallons to the square rod. If farmers would duly consider how cheap and pure this wine is, and with what ease they could make it, I think few of them would neglect the culture of the currant, or exchange the produce of their fields and their dairies for imported wines. Sound policy requires them if they consult their ease and happiness to live, as far as may be, on their own productions. This is the direct road to security and practical independence.

My method of making wine is to gather the currants as soon as they are ripe; to put one quart of water to three pounds of currants and let it stand thirty six hours in a vessel in the cellar. I then extract the juice from the currants by a press made for the purpose, strain the liquor clean and add to it two pounds of good brown sugar to every three pounds of currants. After stirring the liquor till the sugar is nearly all dissolved, I put it into a clean cask, and when it is sufficiently fermented I add one gallon of brandy to every seven gallons of the wine, stir it well, and after a few hours exclude the external air from the liquor. In March it will be fit to bottle; or you may preserve it in a sound state on the lees for a considerable time, or what is better, by putting it into another cask. This may not be the best mode of making wine, but it produces such as is good and wholesome. I have drank very good currant wine to which no brandy or other spirits had been added. Currants have more juice and are more acid in some years than in others, and some sugar is sweeter than others; the quantity of sugar should therefore be varied, but ought never to exceed the proportion I have mentioned.

In treating upon the subject of gardens, I have from the brevity I prescribed to myself, omitted a consideration of the medicinal herbs and roots which we may raise, and the important uses to which they may be applied. I have said nothing upon the beauty and fragrance which beds of flowers display; or what is more important, the pleasure and utility which a well stored garden affords to the lovers of botany. My sole object was to suggest hints upon the use and importance of a kitchen garden. To those already suggested I will only add, that I believe few errors are more common with farmers, in the management of their gardens, than shallow digging, sowing their seeds too thick, and neglecting the weeding of them in the early season of gardening.

CINCINNATUS.

FROM THE MASSACHUSETTS AGRICULTURAL JOURNAL.

An Essay on the advantage of manuring with green crops. By S. H. Pomeroy Esq. first Vice President of the Society for promoting agriculture in Massachusetts.

That eminent chemist, Sir Humphrey Davy, who has shed so much light on the *practice* as well as on the philosophy of Agriculture, observes, that "*land* when not employed in preparing food for animals, should be applied to the purposes of the preparation of manure for plants; and that, this is affected by means of green crops, in consequence of the absorption of carbonaceous matter in the carbonic acid of the atmosphere. That, in a (*naked*) summer fallow a period is always lost in which vegetables may be raised, either as food for animals or as nourishment for the next crop."

The rewards offered by the board of Trustees of the Massachusetts agricultural Society for more than twenty years successively, for the best experiments on ploughing in green crops for manure, appear to be still unclaimed; there is of course good reason to believe that the practice is very limited in the Commonwealth. To shew the advantages that result from such a system, elsewhere, the following is transcribed from a letter that I addressed to John S. Skinner, Esq. of Baltimore, the able and zealous Editor of the AMERICAN FARMER, and which appeared in that paper last November.

"Among the various plants applied as green dressings for the restoration of worn out soils, the WHITE LUPIN stands pre-eminent in those climates that will permit their growth between the periods of *harvest* and *seed time*." That a trial may be made with them, I have forwarded half a bushel of the seed, which I trust you will cheerfully distribute for the benefit of our Southern brethren. These were sent to me from Fayal; and the following account, which I have collected, of the effects of their culture, will, at least, serve to convince us, that "the Earth *ever subservient to the wants of man*," when exhausted by his insatiable demands, requires from him but a little *mechanical* aid, to enable her still to 'spread his walks with flowers and his table with plenty.' The island of Fayal though in the same parallel of latitude with Maryland, is subject to a temperature seldom above 80, or below 50 degrees of Farenheit. The soil is thin, and incumbent on *scoriæ* and other *un-decomposed* volcanic substances; but naturally exceedingly fertile. For a long period of time, every part accessible to the plough, has been in tillage; and, with the exception of selected patches shifted for flax, under alternate crops of wheat and Indian corn, (the latter being the chief food of the labouring classes.) Such a system of severe cropping; the resources for manure very limited, and without the advantage of improved implements or modes of culture, caused a visible deterioration of the soil; the crops lessened from year to year; partial importations were resorted to; and the *well born* of the island became seriously apprehensive of the most distressing consequences.

"Providentially, some 15 or 20 years since, the *White Lupin* was introduced from Italy, and though it came by accident, to a people strongly bigotted to old practices of husbandry, the cultivation soon became general.

"The wheat and corn are harvested in August, the land is soon after ploughed and Lupins sown on the *surface*, or but slightly covered, at the rate of two bushels per acre. In February they flower, and are then turned in with the wheat, corn or flax in their several rotations. By this management a progressive improvement of the soil has become apparent: there are no longer apprehensions of famine; a very redundant population subsists; and besides supplying 10,000 on the neighbouring island of Pico, where scarce any thing but the *vine* is cultivated, a surplus is often sent to other islands, and in some instances to Lisbon!

"Lupins are ranked by Gardeners among the hardy annuals, but I am not able to say what degree of frost they will bear. From a single experiment I am led to believe that, owing to the droughts to which our climate is subject, not much advantage will be derived by sowing them on summer fallows as a dressing for winter crops. Their application to spring crops, in those sections of our country where they can be grown in season for that purpose, will probably become the first object of experiment."

The culture of crops to plough in for manure, is by no means a modern practice. The *Romans*, 1800 years ago, according to Pliny, cultivated and applied Lupins for manure in the same manner *precisely* as they now are in Italy, and in Fayal.* But this plant is supposed to be unsuitable for our climate:—we should not despair, however, of finding a substitute.

It has been asserted by Sir Humphrey Davy, "that it is a general principle of chemistry, that in all cases of decomposition, substances combine much more readily at the moment of their disengagement, than after they have been regularly formed. And in fermentation beneath the soil the fluid matter produced, is applied instantly, even while it is warm, to the organs of the plant, and consequently is more likely to be efficient than in manure that has gone through the process. He also remarks, that it may be doubted whether there is as much useful manure at the end of a clean *(green crop)* fallow, as at the time the vegetables clothing the surface were first ploughed in. That the action of the sun upon the surface of the soil, tends to disengage the gaseous and volatile fluid matters that it contains; and heat increases the rapidity of fermentation; and that in the summer fallow *(with green crops)* nourishment is rapidly produced, at a time when no vegetables are present capable of absorbing it."

Such expositions shew the importance of selecting plants that will arrive at sufficient stature and succulence, in season for *spring* crops; and it may be well to enquire what vegetables there are within our reach, that can be successfully applied.

Clover is unquestionably one of the greatest improvers; but a season is lost by its application. There is another objection—*weeds* and *wild grasses* that rise with it, the first season, ripen and shed their *seeds;* the effects of which, are severely felt in the succeeding tillage rotations.

Buck Wheat has been most used in this country for green dressings; and doubtless with good effects on summer fallows for winter crops; but, besides not coming on early enough for *spring crops*, it often leaves the land foul with its own *seeds;* and is allowed, on all hands, to be a great exhauster.

I am aware that an opinion generally prevails that, if plants are cut in the *milk*, as it is termed, or ploughed in before they ripen their seeds, that the soil is not exhausted! I presume this theory is founded on the supposition, that while the stalk and foliage are green, the supplies are drawn from the atmosphere; but so soon as they become *shrivelled* the seeds are perfected with food exclusively from the soil.

This reasoning is plausible, and possibly correct as to certain classes of vegetables, but the position should in all cases be admitted to a very limited extent.

The hum of *bees* in a field of *buck wheat*, and the flavour of the *honey* from the hives in the vicinity, afford strong presumptive proof that the atmosphere does not alone produce such *sweet* results!

There is another consideration that should govern us in the selection of plants for the object in view. It cannot be doubted, but that the soil contains, not only *materials* suited to particular vegetables, but that several species require the same *principles* to furnish their food. Now from an experiment, well defined, twenty years ago, with oats *cut in the milk*, and from constant observation of the effects of their culture on my neighbour's land since, I feel a thorough conviction that they exhaust the soil of those materials or principles necessary for *clover* and other grass, to a degree very destructive to those all-important crops.

And such have been my impressions that their deteriorating effects on the soil would be lasting, that a few years since, I restricted a tenant, in a lease which he now holds, from sowing *oats*, even to cut in the *milk*, under a penalty of an increased rent of ten dollars an acre,—I wish to be understood, that these observations are meant to apply solely to dry soils—such as are suitable for Indian corn or wheat—and in our dry climate.

Millet is a plant, the cultivation of which is increasing, and as an important article for *fodder*, or for *soiling*, will probably within a short period be more fully appreciated, that seems well adapted, to sow on summer fallows for winter crops, or to turn in late in the fall to enrich the land for the ensuing spring tillage or other spring crops. Of the exhausting properties of millet I am ignorant, but from the bulk of the stalk and foliage, it must make large draughts from the atmosphere, and copious returns to the soil. The cheapness of the *seed* is much in favour of its extensive application.

Of all the vegetables that may be best substituted for the Lupin, rye, in my opinion, is the most promising. This plant, too much neglected to produce food for brutes, but, what is to be lamented, *too much cultivated to furnish poison for men;* possesses all the ameliorating properties for the soil, that we are accustomed to derive from any of those belonging to the *leguminous* tribe. *Rye*, withstands severe drought; and without manure it feeds millions in some countries, from soils little better than blowing sands.

Those soils inclining to loam, that produce a rank stubble, are said to be enriched by a succession of ripened crops; and it is a fact within my own observation, that on the alluvial banks of the Connecticut, rich *friable* loams, which have been exhausted by repeated, *unmanured*, crops of *Indian corn*, have been in some measure restored by two or three successive crops of rye. If it will do this with the *dry stubble*, what may we not expect from it *green*, when buried rampant and succulent in the soil?

In order to ensure a sufficient growth, in season to plough in with *Indian corn* and most of our *root* crops, rye should be sown the beginning or by the middle of August, and much thicker than when intended for a crop of grain. If it gets too forward before winter, it should be fed down with *light stock* or mown. Winter rye sown early in the spring grows rapidly, and will generally arrive at sufficient stature in season to be turned in as manure for ruta baga. Rye ploughed in when in full flower and *millet* sown, which it will bring forward with great luxuriance, and that in its most succulent state, turned in for *wheat*, may be one of the best fallow preparations for it that can be devised; and is probably the cheapest and most convenient process to restore an exhausted soil. At the same time it should be considered, that *gypsum* acts more powerfully on soils thus prepared.

I have been induced to submit the foregoing remarks, not only from an impression that such a system, as has been imperfectly suggested, will tend to increase our products immediately, and ensure a progressive improvement of the soil, but from a firm conviction, that it is one of the most efficient resources that the farmers of New-England can command, to enable them to meet the crisis that awaits them; and for which, perhaps, they are not fully prepared.

By the noble efforts of the State of New York, those fertile regions in the west, near four hundred miles from navigation, will soon be (approximated *for every useful purpose and produce the same effect*, as if they were within forty miles of the Hudson,)—And I apprehend that the question cannot be too soon propounded—How is the *Massachusetts farmer* to meet in the market on equal terms, the mass of agricultural productions which will then inundate the shores of the Atlantic?

Is it by *Canals* in an uneven confined territory, on which the most profitable staple is grazing? We have no *inland seas* mingled with mighty rivers, to feed levels through rich alluvial tracts of an hundred miles in extent! No inexhaustable reservoirs of *brine*, within twelve feet of the surface, seven times stronger than the waters of the ocean; and from which the whole Atlantic seaboard may be supplied with the heavy article of Salt as *cheap* and of a *purer quality* than can be obtained from any part of the world! Neither do our mountains afford those valuable and ponderous minerals, the transportation of which on canals, contribute to the main support of those costly undertakings in Europe!*

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* See *Pliny's Nat. Hist. Book* 17, *chap.* 9. *book* 18, *chap.* 14—27.

* *The canal from Lake Erie to the Hudson,* 363 *miles, will probably be finished in* 1823. *For* 240 *miles on its line, not a single yard of rock is necessary to be removed! The average cost of the whole canal is estimated at* $13,800 *per mile. The expenditure for canals in England average* $22,000 *per mile. The Middlesex canal is said to have cost* $17,000. *Mr. Gallatin supposed the medium cost of canals in America would amount to* $31,000 *per mile. See North American Review for January,* 1822. *Art. xii.*

HORTICULTURE.

POMARIUM BRITANNICUM,

An Historical and Botanical account of Fruits known in Great Britain, by Henry Philips —Second Edition.

(Continued from page 97.)

ACORN.—GLANS.

The Oak Tree—Quercus.—In Botany, of the Monoecia Polyandria Class.

The acorn, which is the fruit or nut of the oak tree, was the food of the ancient Britons, and particularly of the Druids, who, says the historian, lived in caves and hollow trees; their food was acorns and berries, and their drink water. The name of Druid seems to be taken from the Greek word δρυς, an oak. They thought whatever grew on the oak was sent from heaven, and nothing was held so sacred by them as the mistletoe of an oak; and they believed it to be the favourite tree of the Deity.

Content with food, which nature freely bred,
On wildings and on strawberries they fed;
Cornels and bramble-berries gave the rest,
And falling acorns furnished out a feast.—*Ovid.*

Acorns were not the food of the Britons only. The inhabitants of Chios (in ancient times) held out a long siege, having no other food but acorns.

Acorns are eaten to this day in Spain, where they long remained a delicacy at the desserts. Cervantes often mentions them in his Don Quixotte; but the Spanish acorns are certainly of a sweeter nature than those of England.

In times of scarcity and dearth of corn, they have been ground and baked into bread, both in this country and in France; but the taste of it is rough and disagreeable, and indeed acorns are said to be hard of digestion, and to cause head-aches and flatulence.

The study of botany, and the encouragement given to agricultural and horticultural pursuits, have so wonderfully improved the state of this country, that what in early ages a king would have feasted on, the beggar now refuses; and the acorn is scarcely known as affording nourishment to the human species, even among the wandering vagrants who pitch their tattered tents, and cook their scanty fare beneath the branches of the trees that produce them.

Should there remain any persons so ignorantly obstinate, as to exclaim against the study of botany as useless and uninteresting, let their plentiful desserts be furnished with a scanty supply of acorns, and their wine be exchanged for the beverage of their forefathers; and soon would they join in the praise of this science, and of all those who have given their time and talent to improve the health, and add to the luxuries of man, by this interesting and beneficial study, which, next to astronomy, carries our thoughts to heaven, and causes us to join the Psalmist in his exclamation, "O Lord, how wonderful are thy works, in wisdom hast thou made them all."

Before the Conquest, the wealds of Sussex (which is the largest valley in Europe) were one continued forest from Hampshire to Kent, principally of oak trees, that were only valued for the number of swine which the acorns maintained.

Acorns are but little used at present, except to fatten hogs and deer; they are sometimes given to poultry, and would be found an advantageous food for fowls, were they dried and ground into meal.

In medicine, a decoction of acorns is reputed good against dysenteries and colics. Pliny states, that acorns beaten to powder, and mixed with hog's lard and salt, heal all hard swellings, and cancerous ulcers; and when reduced into a liniment, and applied, stay the bloody flux.

Every part of the oak is styptic, binding and useful in all kinds of fluxes and bleedings, either inwardly or outwardly; the bark is frequently used in gargarisms, for the relaxation of the uvula, and for sore mouths and throats. An extract made from the bark is said by some to be equal to the Peruvian bark.—*Chambers.*

The gall nuts of the oak, are of many kinds, but they have all some medicinal virtue. I learn from Pliny that they were used by the Romans to colour their hair black.

John Ellis, Esq. discovered that acorns can be preserved in a state fit for vegetation for a whole year, by enveloping them in bees wax: other seeds may be conveyed from distant countries, by the same means.

The ancients thought, that of all trees, the oak was made first; and that among men, the Arcadians were born first; and that is the reason why they were compared to the oak.

It seems that in ancient times, the oak tree was not venerated by the Heathens only, as it appears there were oak trees in the temple of the true God, for the bible informs us that Joshua "wrote the commandments and the precepts of the Lord, in the book of the law, and that he took a very great stone which he put under an oak, which was in the sanctuary of the Lord."

In the valley of Mamre, which was in the beautiful country of the tribe of Judea, where Abraham was visited by the angels who announced to him the birth of Isaac, stood an oak, that became celebrated as the tree under which Abraham often went to repose and refresh himself. Bayle says, that this oak was said to have existed under the emperor Constantius.

It was an oak that caused the death of the son of David in the battle of the wood of Ephraim: "And Absalom rode upon a mule, and the mule went under the thick boughs of a great oak, and his head caught hold of the oak, and he was taken up between the heaven and the earth: and the mule that was under him went away."

A peri-wig maker in the town of Lewes, in Sussex, made use of this story to recommend the sale of false hair. He had a sign painted on the front of his shop, representing the rebellious son of David hanging in the oak by the hair of his head, with this whimsical couplet below;

O Absalom! unhappy sprig,
Thou should'st have worn a periwig.

It was an oak-tree also which cost Milo of Crotona, the most celebrated wrestler of Greece, and who was always the conqueror in the games, his life. He possessed prodigious strength. It is related that he held a pomegranate in his hand so firmly, without hurting or smashing the fruit, that no person could open his fingers strait, so as to take it from him. He would put his naked foot on a quoit, greased with oil, and whatever effort was made it was impossible to shake it. His confidence in his (almost supernatural) strength was fatal to him, for having once found in his way an old oak-tree, nearly opened by wedges, which had been forced by the hatchet and hammer, he undertook to finish the felling of it, by the power of his arms alone; but in the effort he undid the wedges, and his hands were caught by the two parts of the oak, which joining together again, he was unable to liberate himself, and was devoured by the wolves.

The famous forest of Dodona, in Epirus, consisted of oaks that were consecrated to Jupiter; this was one of the most ancient oracles, of which we have any particular account. Herodotus gives two accounts of the rise of this oracle, one of which clears up the mystery of the fable, *viz:* that some Phœnician merchants carried off a priestess of Thebes into Greece, where she took up her residence in the forest of Dodona, and there, at the foot of an old oak, erected a small chapel in honour of Jupiter, whose priestess she had been at Thebes; and this was the first temple that was ever seen in Greece. Suidas informs us that the answer was given by an oak. Homer has also delivered the same account; and as it was generally believed to proceed from the trunk, it is easy to conceive that the priestess had nothing more to do than to hide herself in the hollow of this oak, and from thence to give the pretended sense of the oracle, for the distance the suppliants were obliged to keep, was an effectual means to prevent the cheat from being discovered. During the war between the Thracians and Bœotians, the latter sent deputies, to consult this oracle of Dodona, when the priestess gave them this answer, of which she doubtless did not foresee the consequence, "If you would meet with success, you must be guilty of some impious action." The deputies suspected that she prevaricated with them in order to serve their enemies, from whom she was descended, resolved to fulfil the decree of the oracle; and therefore seized the priestess and burnt her alive, alleging, that this act was justifiable in whatever light it was considered; that if she intended to deceive them, it was fit she should be punished for the deceit; or, if she was sincere, they had only literally fulfilled the sense of the oracle.

On Mount Lycæus, in Arcadia, was a temple of Jupiter with a fountain: when rain was wanted, it was thought that it would be obtained of the god by throwing in the fountain a branch of the oak tree.

Socrates swore by the oak, perhaps because this tree was consecrated to Jupiter.

There was an oak near Priene, a city of Ionia, near which a thousand Samians were killed by the Priennians. From thence came the custom that the women of Priene had to swear by the darkness of the oak, because they had lost, in this place, their fathers, their husbands and their sons.

The veneration that the ancients had for the oak, gave rise to the Greek and Latin proverb "Speak to the oak;" which signified, speak in good security. They had also another proverb on the oak; when they spoke of persons they did not know the birth of, it was said they were born of an oak, because the ancients often exposed children in the hollow of trees.

Lucan compares Pompey to an old oak, hung with superb trophies.

The oak is a tree of slow growth, requiring a century before it will arrive to its full perfection. Pliny, in his Natural History, states, that hard by the city of Illium, there were oaks near the tomb of Ilius, which were planted from acorns when Troy was first called Illium. He also says, "the great forest Hercynia is full of large oaks, that have never been topped or lopped." "It is supposed," adds this naturalist, "that they have been there since the creation of the world, and (in regard to their immortality) surmounting all miracles whatever. The roots of these trees run and spread so far within the ground that they meet each other, in which encounter they make such resistance, that they swell and rise upwards to a great height, in the form of arches." In some instances, he says, they were so high and so large that a whole troop of horsemen could ride upright through these natural portals, in order of battle.

Linnæus mentions fourteen species of the oak-tree; Miller extended them to twenty; and Aiton describes forty-five varieties of this tree. The most common of the English oak produces the acorns close to the branches, without any stalk: but the most esteemed for ship building is found growing in the Wealds of Sussex and Kent; and this tree often produces its acorns with foot stalks as long as the cherry stalk. Young says, "Oak is the staple commodity of Sussex, which, from the remotest antiquity, has been celebrated for the growth of oak; it is estimated that not less than from 170 or 180,000 acres are occupied by this timber, the quality of which is acknowledged by navy contractors preferring, and in all their agreements stipulating for, Sussex oak. This author adds, that the soil is so naturally adapted to the growth of oak, that if a field were sown with furze only, and the cattle kept out, the ground would, in a few years, be covered with young oaks, without trouble or expense of planting.

Although the late long war has, in some degree, thinned this country of Oak-trees, still we have many oaks left of extraordinary great age and bulk, and

——— the sturdy oak,
A prince's refuge once, th' eternal guard
Of England's throne by sweating peasants fell'd
Stems the vast main, and bears tremendous war
To distant nations, or with sov'reign sway
Awes the divided world to peace and love.
Phillips.

The celebrated oak in Hainault Forest, Essex, known by the name of Fairlop, is thus mentioned by the late Rev. Mr. Gilpin: "The tradition of the country," says this ingenious writer, "traces it half way up the christian era. It is still a noble tree, though it has suffered greatly from the depredations of time. About a yard from the ground, where its rough fluted stem is thirty-six feet in circumference, it divides into eleven vast arms, which oversptead an area of three hundred feet in circuit; beneath this shade an annual fair has long been held on the 2d of July: but no booth is suffered to be erected beyond the extent of its boughs."

In Bloomfield wood, near Ludlow, in Shropshire, is an oak-tree belonging to Lord Powis, the trunk of which, in 1765, measured sixty-eight feet in girth, thirty-two in length, and which, reckoning ninety feet for the larger branches, contained in the whole 1,455 feet of timber, round measure, or twenty-nine loads and five feet, at fifty feet to a load.

In the vale of Gloucestershire, near the turnpike road between Cheltenham and Tewksbury, stands the Baddington oak, the stem of whose trunk is fifty-four feet: and some of its branches extend to eight yards from the body of the tree.

The famous oak, Robur Brittannicum, in Lord Norrey's Park, at Prescot, was computed to be able to shelter between three and four thousand men. Dr. Plot, in his Oxfordshire, tells us of an oak near Clifton that spread 81 feet from bough-end to bough-end, and shaded 560 square yards.

In Worksop Park, the Duke of Norfolk had an oak which spread almost 3,000 square yards, and near 1,000 horse might stand under the shade.

I have been favoured with the particular dimensions of the large oak that was felled on the Gelin's estate, in the parish of Bassaley, and within four miles of the town of Newport, in the county of Monmouth, in 1810, as communicated by the Earl of Stamford to Sir Joseph Banks.

Body of the tree, ten feet long - -	450 ft.
Twelve limbs and collateral parts, contained - - - - - - - - - -	1850
Dead limbs - - - - - - - - -	126
	2426 ft, or

48 loads and 26 ft.—Quantity of Bark, 65 cwt. and 16 stacks of wood.

Four men were three weeks and two days in felling and stripping the tree. There were 85 pieces of square or hewn timber: the squarers were three weeks and four days in squaring it. One pair of sawyers had been five months in sawing the tree, and had not finished when this account was sent. (Mar. 6th, 1811.)

The tree was purchased by Mr. Thomas Harrison for one hundred guineas.

Part of an oak-tree, twenty-feet in circumference, was drawn out of the Thames in September, 1815, near the ferry at Twickenham, with great difficulty, by twenty-four horses: it is known to have laid in the river one hundred and fifty years.

The timber of the oak-tree is so well known, and so justly esteemed, for a variety of purposes, that it would be superfluous to state the whole of them.

In building ships of war, one great advantage is, that it seldom splinters, which caused foreigners to attribute our naval victories to the excellency of our timber; but the late war [not the one with the wicked yankees,] has given so many proofs of our defeating our enemies with ships of their own building, that they must now acknowledge that the bravery of a British sailor is as firm as the heart of an English oak.

It was not until we had manufactured into furniture all the curious woods of the New world, that the transcendant splendour of the English oak was brought to any degree of perfection by the late Mr. Bullock, of Tenterden-street, and other eminent cabinet makers. Mr. Penning, of Holles-street, Cavendish-square, who I am informed has been the most successful in the choice of this wood, has lately wrought up some old oak-trees of such matchless beauty, that one set of dining-tables brought him the unheard-of price of six-hundred pounds. This far exceeds any thing of the kind we read of, even in the luxurious days of the Romans, although Pliny says, "Our wives at home twit us, their husbands, for our expensive tables, when we seem to find fault with their costly pearls."

"There is at this day to be seen," says this author, "a board of citron wood, belonging formerly to M. Tullius Cicero, which cost him ten thousand sesterces; a strange circumstance, as he was not rich." He also mentions a table that belonged to Gallus Asinius, which sold for eleven thousand sesterces, which is about equal to £70 of our money; and he particularizes a table of citron-wood that came from Ptolemæus, king of Mauritania, which was made in two demirounds, or half circles, joined together so cleverly, that the joints could not be discovered: the diameter of it was four feet and a half, and three inches in thickness. It is related that they set great store on woods of curious grains: some there are mentioned with curling veins, which were called *tigrinæ* (tiger tables); others *panthernæ* (panther); and some are described waved like the sea, and spotted like the peacock's tail. But those of the highest value were of the colour of honey-wine, with shining and glittering veins, or lamprey-veined, running across. I have ventured to make this digression, having seen within these last few years oak of such various grains, that out of them the whole of the above-mentioned, and many other curious representations, might have been selected.

The bark of the oak-tree is a most valuable article for the purpose of tanning; and it is by the aid of this bark, that our English gardeners are able to supply us with pine-apples, and other fruits peculiar to the hottest climates.

The oak principally used for wainscot, &c. is brought from Dantzic and Norway.

The evergreen oak *(ilex)* is a native of the south of Europe, and is planted merely to ornament our gardens and plantations: this variety was introduced into England in 1581, and is found to grow in great perfection on the banks of the Thames, west of London. There is an oak of this description in the grounds belonging to the Bishop of London's palace at Fulham, more than fifty feet high, and eight feet in circumference. I conclude it was planted by Bishop Compton, who introduced many new plants and forest trees from North America and other parts of the world.

(To be continued.)

In our next we shall give, as connected with the foregoing, an article from Thornton's Family Herbal, on the medical and other properties and uses of the oak. It would have been inserted now, but that we feared the reader would disrelish so much in one paper on one subject.—*Edit. Amer. Far.*

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FROM THE NEW HAMPSHIRE PATRIOT.

To every farm a plat of land should be appropriated solely for a garden; and if you have but one, it should contain at the least a quarter of an acre, but double that quantity may be usefully cultivated. It ought to be sufficiently large to raise many of the useful and various kinds of vegetables and fruits, which contribute to the sustenance, comfort, and pleasure, of life; if there be a surplus, and no market for the vegetables, they may with advantage be given to cattle, horses, and swine. The garden should be contiguous or near the house, not only for the purpose of having it under the eye of the owner, but to save time in its cultivation and the daily gathering of its products.

To render a garden secure it should be enclosed with a good fence, and to make it productive it must be dug deep and well manured, and the weeds destroyed, particularly in the early season of the year till the vegetables have taken deep root, and by their vigorous growth covered the ground. The labour and care necessary for this purpose will consume but a small portion of the season: much of the labour may be done when little else would be attended to, and the residue performed by children who otherwise would do nothing but contract habits of idleness, injurious to them in future life. A garden well managed, is an ornament and a source of profit, but if neglected is a reproach and a loss to the owner. Improvements in horticulture with us are of recent date; even in England, as Dr. Pristley observes, "the great convenience of a kitchen garden can hardly be said to be known before the reign of Elizabeth."

Though a garden affords neither bread or meat, yet it yields such a rich variety of sauce as renders less of either necessary, and at the same time gives a higher relish to both. A free use of the culinary vegetables, raised in a well improved garden, contributes much to the economy, support, and health of a family. There are but few countries who have made equal progress with us in the useful arts, in which the mass of the people live so much on *Animal food* as we do; and there are few countries where the expense of living, except taxes, is greater than with us. I know we have the means of good living in our power, and it is right that we should freely enjoy them; but it is a subject of inquiry whether we do not consume more animal and less vegetable food than our health, or our comfort requires. It is certain that animal food contains much nutriment, and affords strength to those who live upon it; but when taken in moderate quantities with a due proportion of vegetables, it will be more useful, more healthy, and afford more ease and pleasure.

Whoever reflects on the products which cultivated gardens afford, will be satisfied that the profits of the land, as well as the labour applied to them, are amply repaid; and that our farmers too much neglect their cultivation. If we have no gardens, or what is almost as bad, if we do not cultivate and improve those we have, we must live without a great portion of the richest vegetables and the most delicious fruit our climate yields. We do not sow or plant them in our fields, and if we did, neither the richness of our soil or the culture would produce them in perfection. If our gardens have not been grossly neglected, they will afford us, ear-ruined if the prices continue at this rate. But were we all insolvent to-morrow, there is sufficient capital in the country to cultivate the ground without ours. The Legislature know this, and therefore care nothing about us. Though there may be too much truth in what he urged, I attempted to appease him by stating, that every one who had monied obligations must share one common fate; and, therefore, what involved the ruin of the farmer, must pull down the whole fabric of society. Your landlord, for instance, though he may have property worth £20,000, yet, from what I have learnt, his debts amount to 10 or £12,000. What ruins you must ruin him at the same time; and, depend upon it, this general system of ruin cannot be persisted in, because, to the distresses of the labouring classes, it will add those of almost every other rank in the walks of active life. Farmer Jobson replied as follows:—

"You contend, the ruin of those who have monied obligations will be added to the distresses of the labouring classes. I cannot admit that. Society will right itself. The capital stock of British agriculture, along with its well cultivated soil, will change hands. I will show you how." With all my supposed knowledge of political economy, I listened to him with profound attention. He continued: "The moment my landlord and myself are ruined, most probably the ample fortune of young Benfield (a more clever and amiable a man lives not) will be laid out in the purchase and cultivation of my farm. Perhaps you may not be aware [farmer Jobson talked of these things with coolness] I already pay two thirds of my rent to him as interest of a mortgage. Now, should both my landlord and myself become insolvent to-morrow, and it cannot be otherwise in the end, should things go on at this rate, are you of opinion my farm would be worst managed by Benfield, a man of talents, information, and fortune, than at present? Besides as I have strength, industry, and some little knowledge, on my side, I may expect him to engage me as his head husbandman." Jobson rather faultered here, but my feeling rendered me mute, and he went on.

"Low-priced gold, low-priced labour, and low-priced corn, may ruin both myself and my landlord; but in what way will that affect the circumstances of the labouring classes? I know you have long pitied, I own justly enough, the starved condition of the operative cotton weavers. You have frequently said this state of starvation compelled them to execute an unusual quantity of work: now take your own THEORY, and as corn gets low in price, their condition will be bettered, less work will be done, the supply of the market will be diminished, and the price of their wages will rise, when the low price of corn has had its natural effect upon the market of cotton goods. To show you a little of this experimentally, the price of corn has come down, they get the same wages as before that occurrence, their actual circumstances are somewhat better, and you do not hear a word among them of that radical spirit which alarmed you so much lately. A little happier times have dispelled it. Besides, look around where you will, in this neighbourhood, and you do not find the husbandry labourers in worse circumstances than are usual; in fact, the weekly payments to the poor are lower now than at this time last spring.

"In this way society will right itself. As the price of corn gets lower, the difficulties of the operative weavers will be alleviated, and their former loyalty will return. The labouring classes make up the great mass of society. They who hold the acknowledged rights to the wealth of the country are the most powerful. Then they who are ruined by monied obligations, though they may be terribly numerous will weigh but a feather in the scale of power. This is my notion of public affairs."

"Well, but Jobson," said I, "in what way will all this right the national debt?" Having assumed a solemn air, he continued, "depend upon it, the moment taxation cannot be carried higher, and I think it is at that height at present, should the public revenue then fall below the public expenditure, that expenditure, along with the interest of the national debt, would be cut down to the amount of the public revenue. Remember the old adage, *half a loaf is better than no bread*; and you must see the fund-holder would remain satisfied with what was unavoidable."

Though the arguments urged by farmer Jobson gave me no better opinion of the *theory* of low-priced gold, however it might be supported by the original bullionists, Messrs. Horner, Brougham, and Huskisson, or since confirmed by the support of my Lord Liverpool, Messrs. Vansittart, Ricardo, &c. than I had formerly held, yet, I confess, he quieted my apprehensions in an extraordinary degree. I cannot, however, banish from my mind the frightful picture of insolvency he had sketched in clear and distinct lines, should this political rage for low prices continue.

But as I have not yet mentioned what I sat down to write about, "The improvement of the Breed of Horned Cattle," as my paper is done, it must be deferred to some future opportunity. I remain, Sir, your obedient servant. JOHN ROOKE.

P. S. Tillage and Hay-making farmers have stated their losses on the last crop. I should feel much obliged to any of your correspondents who occupy grazing farms, if they would favour me with a statement of the disbursements and receipts of actual grazing farms in 1818, 1819 and 1820, through the medium of your paper.

Captain Parry's account of the late voyage to the Arctic Regions has just been published.—Among the numerous interesting facts contained in it, the following, on the singular effects experienced from the intense cold, are not the least curious:—

The effect of the intense cold was such on the 29th October, when the mercury in the barometer stood at 29.70 inches, that "it became rather a painful experiment to touch any metalic substance in the open air with the naked hand; the feeling produced by it exactly resembling that occasioned by the opposite extreme of intense heat, and taking off the skin from the part affected.—The eye pieces of the telescope, if suffered to touch the face, occasioned an intense burning pain."

When the thermometer stood at 26½ degrees, the smoke of the fires in the vessels as it escaped from the funnels, scarcely rose at all above the hawsings of the ships.

On Christmas-day, the officers of the Hecla had a piece of roast beef for dinner, which had been on board since the preceding May, and was preserved without salt, merely by the antiseptic properties of a cold atmosphere.

The distance at which sounds were heard in the open air during the continuance of intense cold, was a matter of great suprise. People were often heard distinctly conversing, in a common tone of voice, at the distance of a mile, and even a greater distance.

An artilleryman named John Smith running into the air without his gloves, had his fingers in half an hour so benumbed, and animation so completely suspended, that on having his hands plunged into a basin of cold water, the surface of the water was immediately frozen by the intense cold thus suddenly communicated to it. His fingers were obliged to be amputated.

The following anecdote illustrates the dry humour of the sailor, and his indifference to hardships of the severest kind:—A party belonging to the Griper being sent to surprise some rein deer, unfortunately lost themselves for several days, and were obliged to live upon raw grouse, which they shot. One of them named Peter Fisher, being asked on his first arrival on board what they have lived upon—"Lived upon," said Fisher, dryly, "the Duke of Wellington never lived so well. We had grouse for breakfast, grouse for dinner, and grouse for supper, to be sure."

ASTRONOMY.

Dr. Olbers has calculated that, once only in a period of 8,800 years, a comet will come as near to the earth as the moon is. Once only in four millions of years, a comet will approach the earth within 7,700 geograpical miles; and if it be equal in size to the earth, will raise the water to the height of 13,000 feet (a second deluge.) And only in 120 millions of years will such a body come in contact with the earth!!!

TO THE EDITOR OF THE AMERICAN FARMER.

John S. Skinner, Esq.

Your last paper, No. 8, contains a letter signed "Francis Valck," which presents in a new arrangement, some old arguments for additional protecting duties in favour of manufactures. As this letter states nothing which has not been before repeatedly advanced by Messrs. Carey and Co. and as often answered, (of which your columns alone afford sufficient evidence,) I presume that this letter was intended solely, as the vehicle of the following panegyric.* "But on this subject," (manufactures) says Mr. Valck, "I beg leave to refer you to two *most luminous* essays, which Mr. M. Carey has written " upon the subject: They are entitled the New " Olive Branch, and an appeal to common sense " and common justice, &c. These are the *very* " *best things* I have ever read on this interesting " subject; they contain the *soundest doctrines*, " because they do not deal in theories, but *stubborn facts, which leave no doubt upon the* " *mind*."

There are two peculiarities for which the writers of the *Carey school* are noted: 1st. They continually repeat over and over and over again, the same "*facts*," and arguments, and every time assume the tone of telling something new: 2dly. They pass without notice the most ample refutation of these said "*facts*," and arguments, or merely give for answer a repetition of the old assertion. It is not my intention, Mr. Skinner, either now or hereafter, to oppose such reasoning as this; but merely to refer Mr. Valck, to preceding numbers of the American Farmer, which at least strongly contradict what he says "leaves no doubt upon the mind," and which if he had read, I presume that both his candour and his chivalrous spirit would have induced him to notice, previous to putting forward his re-re-assertions. At pages, 348 and 389, of vol. 1; 57, 89, 156, 339 and 377 of vol. 2, and 364 of vol. 3, your correspondent may find the restrictive system ably opposed on general principles by the agriculturists for whose *benefit* he urges its completion. At page 322, vol. 3, there is a statement of the dreadful effects on agriculture, arising from the existing high duties, and at page 182, vol 3, he may see tested the truth of some of the most important "*facts*," of his "very best" author in favour of manufacturing monopoly.

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* *This inference will not be considered unfair if the first leaves of the "New Olive Branch," are examined. Mr. Carey has there advertised his previous writings, with such recommendations as he could obtain. Among the rest, his "addresses," are accompanied with a long fulsome compliment "from the American Farmer," which every reader would of course attribute to its Editor. Believing it impossible that the sentiments could proceed from Mr. Skinner, I took the trouble to look until I found the piece. It was extracted from the essays of an anonymous contributor to the first volume, for whose words Mr. S. is no more responsible than for mine, or for Mr. Valck's.*

Mr. Carey writes a new book in support of protecting duties by merely copying out of his old ones; hence his rapidity in composition (so far as it respects bulk, and new titles,) almost equals that of the author of Waverly. But we are no more to expect a change of matter in a new publication, than to change the quality of small beer, by pouring it out of a junk bottle into a decanter. Thus his "three letters, &c." were *poured out* of his "addresses," again poured into his "new Olive Branch," (all of which I have seen, and what is more, have read,) and I have no doubt the same stale draught is again presented in his late appeal to common sense, which appeal it is much to be regretted he did not make at least ten years sooner. If this author and his followers would only vary their eternal fare ever so little, if they would only convert their cold broken meat into a hash or a broth, it would be more tolerable: but it is past endurance to be called to "cut and come again," to the same poor dish, until repetition doubles our first feelings of disgust.

You lately intimated a wish to exclude all pieces on this or other subjects, relating to the interests of Agriculture, unless signed by the real names of their writers. This custom is excellent when agricultural experiments and facts are stated, because their value rests entirely on the credibility of the author, and we ought to attach none to a fictitious signature. But I protest against the rule being extended to arguments which necessarily rest upon their own strength, and not at all (or at least they ought not) on the name of their author. I wish to see your paper fairly open to both sides, on every question affecting the welfare of agriculture, and it is admitted by all, that none affects it more than this. By excluding anonymous pieces, you would forbid all *farmers* to join in the debate, while enough men of different habits would have no objection to placing their names before the public, for the purpose of attacking our dearest interests. Nor will you do us more justice by allowing a fair field to societies. Agricultural societies are necessarily slow moving bodies, and serviceable as some of them have been, our cause would be desperate, was it left entirely to be defended by such inert champions. On the other hand, in towns, (particularly Philadelphia,) *Societies, Conventions and Institutions*, for supporting the views of the manufacturers, may be easily made upon any occasion, taking new names every month, and each individual acting as many characters, as the members of a reduced company of strolling players. Besides, your correspondents could easily deceive you into violating your own rule, by merely signing John Smith, William Thompson, on any other unappropriated name, which you could not possibly know to be fictitious. For myself, I am not willing to place my name before the public, except in stating facts in agriculture, in which cases, it shall always as heretofore be subscribed. For other matters, it is sufficient that *you* know me, and that whoever may have a *right* to ask it of you, is welcome to know it also.

ANTI-MONOPOLY.

THE FARMER.

BALTIMORE, FRIDAY, JUNE 28, 1822.

☞ The communication addressed to the Editor of the Farmer through the Easton Gazette of the 22d, has been cut out and forwarded to New-York, to the gentleman alluded to; at the same time it is but fair to state that our impressions are, that he will settle either in the immediate vicinity of a large sea port town, or in the Western parts of Pennsylvania or New York; with every wish to serve the writer of the communication, he will admit that the matter is one, in interest, too limited, to appear as a communication in this Journal. To advertisements of *that character*, we give insertion for $1 per square, but never *repeat* them; nor is that necessary, as nine persons out of ten preserve their papers.

☞ An Error—in Mr. Smith's Address to the Agricultural Society of Maryland, as published in our 11th No. of this Vol. instead of electrick force and electrick fluid, near the bottom of the middle column, it should have been printed elastick.

GENUINE SEED,

☞ The great inconvenience which he has seen resulting from the want of genuine seed of a few of the vegetables most generally in use *for stock*, and a desire to see greater attention given to the raising of roots and vegetables for *winter feed*, have induced the Editor to have some cultivated under his own eye, that he might feel confidence in recommending them—and accordingly he can now supply Ruta Baga seed, White Norfolk, and red top (very large) turnip seed—also a great variety of Shaker's Seeds—hitherto advertised by Mr. Redding, and which may be depended on. The genuine mangel wurtzel seed, will be for sale also by Mr. Redding in due season.

Fourth of July Parties

Would manifest their patriotism by taking out a portion of *American* wine, manufactured by Major Adlum, of the District of Columbia. It may be had in varieties of Messrs, Marple and Williams, and the Editor of the American Farmer will be thankful for the candid opinion of connoisseurs concerning its qualities.

PRICES CURRENT.—CORRECTED WEEKLY.

Wharf flour $6,50 cash—Howard street do $6,75—Corn, white, 75 cts.—yellow do. 72—Red wheat—$1 38 to 1 39—white do, $1 40 to 1 45—Rye 68 to 70—Herrings, No. 1, $2 87 to 3—No. 2, ditto $2 50.

Tobacco Maryland.—Sales have been made the present week, at the following prices:—Fine yellow $25 to $35—fine spangled, $18 to $25—fine red, $12 to $18—good, do. $6 to 12—Inferior, $4 to $6—common, $2 50 to 3 50—seconds, $1 to 6.

One Hogshead of fine spangled, raised on the farm of the late Dr. Colegate, sold for $18—one do. by H. Duvall, for $20—one by John Duvall, $25—3 hhds. raised by Mr. Henry Jones, of Benedict, sold for $13 and $19—seconds, at $4.

All other articles same as last report.

YOUNG COMET.

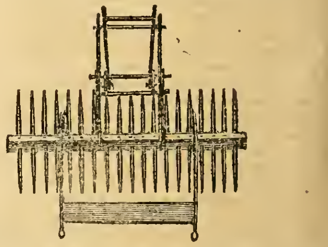
Many persons having expressed a desire to obtain Stock from the fine imported Bull YOUNG COMET, exhibited at the last Cattle Show, they are informed that they have now an opportunity of doing so by sending their Cows to him near the first toll gate on the Reisterstown turnpike road, two miles from Baltimore, at *Five Dollars*, for each Cow, *the money to be sent with the Cow.*

YOUNG COMET is two years old and was shipped from Liverpool, a calf of seven weeks, when a farmer there offered for him thirty guineas, saying "so fine an animal ought not to be suffered to leave the country." YOUNG COMET is of the celebrated improved short horned breed, but belongs to the tribe of *deep milkers*, combining also early maturity and great disposition to fatten. At 13 months old he weighed 843, and eleven months after 1624 pounds. His dam, which was imported with him and belonged to the present owner of YOUNG COMET, was a very extraordinary *milker*, and the admiration of all who saw her. Pasture if required will be furnished without charge, and Cows from a distance will be taken care of and *well milked.*

YOUNG COMET will be let for the season commencing the first of July, or by the month—

☞ *Enquire of the keeper of the first toll gate on the Reisterstown turnpike roak.*

PATENT HAY AND GRAIN RAKE.



Messrs. Pennock and Pierce, of Chester county, Pennsylvania, have lately patented, and used during the last and present season, a horse rake for gathering hay or grain, into wind-row, or heaps, as desired. The plan of this machine is uncommonly simple, and one of them may be made by any rough carpenter, or person accustomed to the use of tools. The price of this rake complete, including the patent right, will not exceed ten dollars, or for the patent right, two dollars only.

We have seen this machine in operation; it does the work quite as well, if not much better, than it is generally performed by the hand rake, and with one man and a horse it is believed that it will do the labour of ten or twelve men. Its advantages over the common horse rake are very important, equal to a saving of one half of the time; because with this rake the horse proceeds continually on, the hay or grain being discharged at pleasure, and without any stoppage or impediment; by the means of which facility, also, it passes over any obstruction that may happen to be in a field. The simplicity, utility, and cheapness of this instrument, renders it an object highly to be desired by agriculturists, for its saving of labour in *hay making* time, when laborers are always so much wanted.

☞ This machine, price $10, can be had of Joseph T. Ford, Baltimore, manufacturer of Agricultural Implements generally; Gideon Davis George Town, D.C. and Jacob Little, of Frederick Town, Md. Orders to either of the above named persons will meet with prompt attention.

PUBLISHED BY JOHN S. SKINNER.

On the other hand; would not greater benefits flow, was every dollar *of capital* that can be spared from commerce and manufactures, appropriated to those vast improvements of which the soil of Massachusetts is susceptible? And should a mania for water works arise, it may have ample and profitable gratification, by cutting *trenches* on the ridges, and *tunnels* through the hills, thereby draining the numerous ponds, swamps and bogs, creating luxuriant meadows; and by erecting *hydraulic machines* on the innumerable streams and brooks, to irrigate the parched fields on their borders! It is by such enterprizes that the Massachusetts farmers may expect to prosper, aided by a regular system of management, with the application of all the *manures* that can possibly be collected, on one third part of the soil that usually receives them, and by enriching the remainder by that joint process of nature and art, PLOUGHING IN OF GREEN CROPS.

Brighton, *3d*, *June*, 1822.

RESIGNATION.

Edwin, the celebrated comedian, went from a rehearsal with the most uncomfortable sensations.—The *futile* cause was, having a dramatic part assigned him, which he imagined not precisely to his ability. Going through and round the court, gnashing his teeth and biting his nails in the bitterest vexation, his perturbation was suspended by the following event:—

"Green and pretty bow pots, two a penny, come buy my bow pots, ye pretty maids; ah! God Almighty bless your honor, will you buy a bow pot for your window—madam—of the hazle-tree with the nuts placed in order, some lilies of the valley, wild rosemary, and a few violets."—Sung, or rather whistled the old woman, who offered him the most rural *bouquet*, with a look fraught with so much wistfulness, that Edwin could not refrain asking her a few questions.

How old are you, my poor woman?

Eighty-five, your honor, next Martinmas.

Where do you live?

At Finchly, replied the woman.

What is your name?

Ann Lewton, an' please your honor.

And did you walk from Finchly, to-day? interrogated Edwin.

Yes, indeed, Sir, and I hope with God's blessing, to sleep there this night.

How much shall you make if you sell your bow pots?

Seven pence half-penny, sir.

And when you have disposed of them, you will return contented to your cottage?

Yes, indeed, I shall.

Oh, Heavens! exclaimed Edwin, and shall we presume to murmur at the dispensations of Providence, when this calamitous creature bending under the infirmities of age and the pressure of poverty, can be thankful to her Creator for advantages that comparatively is misery in the extreme.—Do you enjoy a good state of health?

I never was sick but twice in my life your honor, once on the death of my poor Billy—and another time when my husband lay ill of an ague, for nine weeks almost without food.

Did he survive the illness?

Ah! no, my sweet gentleman, said the hoof worn doe with her eyes full of tears; it was in the winter of the hard frost, and he could not bear up against the blight; he died, and the stroke would certainly have broke my heart with grief, if it had not pleased God that it should be otherwise.

And did no one contribute to your relief? said the repentant comedian.

Oh yes, a good lady in our neighbourhood sent us six pence and some rasberry wine; but alas it was too late, but it was the will of heaven it should be so, and it is our duty you know to bear the afflictions of God with patience.—Will your honor buy a bow-pot?

No: keep your bow-pots for better customers; but here's a shilling for you.

A shilling, your honor, cried the other, but lack-a day, I am so poor I have no change; I want no change, said Edwin; you have given me a lesson of Philosophy, that has done me more real service than all the sophistry of Shaftsbury, the black ethics of Hume, or the levities of a Voltaire. The practice of Christianity must be the foundation of happiness—and whosoever disputes its pre-eminenee over every other system of morality, is not only an enemy to himself, but a foe to the general interest of human kind.

What a lesson and what materials for reflection and profitable commentary does the foregoing anecdote afford! Let those who are really rendered miserable by the petty concerns of life, by the want of a rigid compliance with orders to domestics, probably indistinctly given, or not understood by the too great length or shortness of a trimming, or the inaccurate cut of a dress—or by the numerous, but really unimportant crosses we often meet with, reflect upon the philosophy and truly pious resignation of the old widow Lewton, on the death of her "poor Billy and her husband," and take shame at the misery they bring on themselves and those connected with them, by giving way to morbid feelings, or nervous instability. What, when we are reclining on beds of down, or a golden sofa; rolling in a splendid equippage, or "clothed in fine linen, and faring sumptuously every day" are we to be rendered unhappy by the want of etiquette, in those from whom we expect deference, by derangement of our plans, which we are not sure would have increased our happiness had they succeeded, or by diappointments, which it is quite probable prevented the occurrence of a serious real misfortune to us! When we look around, and see the world full of real, poignant distress; of sickness and poverty combined, and in those too, who likewse once enjoyed the good things of this life, can we reconcile it to ourselves to be made unhappy by trifling events, or by an anticipation of evils? The author of the first of moral Codes tells us, that "sufficient unto the day is the evil thereof", and shall we take distress on interest, and permit ourselves to be miserable by the prospect of its possible occurrence? The philosophy of the ancient Pagan teachers was directed against such weakness, and shall we give way to it, and still lay claim to the name of christians? Our duty requires, even when real misfortune assail us, to be prepared, to sanctify the affliction, and be thankful that our lot is so much more happy, that so many more blessings and enjoyments are left to us, than numerous fellow creatures within our knowledge, whose merits are even greater than our own, and whose sufferings, as far as we are enabled to judge, are less deserving than those of which we complain.

J. M.

ENCOURAGEMENT TO RAISE FLAX.

The following is copied from the Goshen (Orange County) Patriot.

Mr. Silas Newman, of the town of Goshen, sowed last spring thirty-one quarts of Flaxseed, on an acre and a quarter of ground from which he raised *five hundred and sixty-four pounds of Flax*, and *fourteen bushels and four quarts of Seed.* This, at the present price of flax and seed would amount to about *sixty dollars the acre.*—The expense of seed, cultivation, and cleaning, according to the usual tedious mode, could not be more than thirty dollars; here then would be a clear gain of *thirty dollars* on an acre of land, in one year; and when the new *machines* get into use, ten dollars of that expense will be saved on five hundred and sixty pounds; which would leave a profit about equal to the value of the acre of land. This, it is true, is an extraordinary yield, in the present neglected state of the article, but if our farmers would turn their attention to the subject, and make themselves acquainted with, and pursue the best mode of cultivating flax, we venture to say, that the yield would not be considered so large.

Selections from late numbers of the London Farmers' Journal, received at the office of the American Farmer.

SIR JOHN SINCLAIR ON THE TURNIP FLY, OR BEETLE.

George Street, *Edinburgh*, 12*th May* 1821.

SIR,

I am a great friend to discussion, and I am glad to find that the letters I sent you have drawn forth the observations of some very respectable farmers on some important subjects of husbandry, who might not otherwise have been induced to communicate their thoughts, or the results of their experience, to the public.

To Mr. Paul's merits as a farmer, and more especially his attention to the nature of the turnip-fly, or beetle, and the means of effecting its destruction, I am no stranger, having occasionally met, and conversed with him on that subject at Holkham; and I wish much that other intelligent farmers would adopt the plan that he has done, that of directing *particular* attention *to one useful object*, and publishing the result of their experience respecting it. In this way much valuable information might be obtained, by which the agriculture of the country would be most essentially benefitted.

In regard to the point to which I wish once more to call the attention of your readers, I think it right to state that the information I transmitted to you in my former letter, on the means of destroying the fly, "*by flame and smoke*," was founded *upon actual experiments*, reported to me from a most respectable quarter, and represented to have fully answered in practice, *even on alternate ridges.* The plan is, therefore, entitled to a fair trial above all, in cases where the first crop has failed. In that event, Mr. Paul will admit that the fly has been *decoyed* into the field, and is, therefore, placed in a situation where its destruction may be effected in the manner I have proposed. Under this system, therefore, if the first crop should not have succeeded, the second one may almost be confidently relied on at a very trifling expense; and thus it is in the power of every active and intelligent farmer to insure a crop of turnips.

In regard to Mr. Paul's modes of destruction, the plan of *a decoy* seems to be ingenious; but after the insects have been brought there, I think it would be a shorter and simpler plan to destroy them *by flame and smoke*, than by any other means that can be suggested; and I hope that Mr. Paul himself, with his well known zeal for improvement, will try the experiment, and ascertain how far it will answer.

Having much advocated the use of salt for agricultural purposes, I derived much pleasure from the perusal of a letter, signed *IV. T.* in your paper of the 7th May. I must again express my regret, that your correspondents will not subscribe their names and places of abode to their letters, as it gives the information they transmit much greater authority. Mr. *W. T.*'s communication is of very great importance, and if his plan were generally adopted, it would materially improve the art of feeding stock on green crops, and the profit to be derived from that practice.—It would be desirable, however, that he were more explicit as to the sorts of green crops he cultivates, and whether he tried salt with cattle-feeding upon clover, to prevent their being *hoven.*

I hope that any of your readers who may have *other facts* to state in favor of the use *of salt*, will send you an account of them for insertion in *The Farmers' Journal.*

I remain, Sir,
Your very obedient servant,
JOHN SINCLAIR.

N. B. All along the coasts of the kingdom, dried seaweed would be an excellent means of destroying vermin in the ground, by means of flame and smoke. It is to be observed, that land, when smoked, for a long time retains a smell offensive to insects.

ON FEEDING OFF CLOVERS SAFELY WITH BREEDING STOCK.

Yorkshire, May 10, 1821.

Sir,

Many years ago I lost a considerable number of sheep in the manner *J. G.* states, which induced me to sow with the clovers one and a half or two pecks of *long grass** upon an acre, which variety, I believe, is very pleasant to the sheep, and not injurious to the land as some suppose.—And when I remove the sheep (which is frequently) it is in an evening, when they are pretty well satisfied with food, and least dew upon the grass, for I consider the clovers sufficiently succulent without dews. Since the above practice, I have experienced very little loss, not one this season; and I find my sheep to improve as much as any upon land of the same quality.

I remain, Sir,
Your obedient servant,
JOHN HOWGATE.

P. S. I presume *W. T.* has had his ewes too high in condition, particularly the shearlings, which has occasioned the loss he states. My reason for believing so is, that before I had much experience I suffered in a similar way; however, for the last thirty years I have been very fortunate, which I impute to keeping them (the ewes) low, after taking from the ram, until within three weeks of lambing.

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* *By* long grass, *we suppose our correspondent to mean* rye grass, *either the common or the improved ; if any other grass, we should be glad to know its name.—Edit. Farmers' Journal.*

QUERIES ON A DISEASE IN SHEEP.

Lee, May 16, 1821.

Sir,

As the columns of your Paper are so usefully employed in the general spread of agricultural improvement, I shall make no apology for troubling you with the following description of a complaint to which several of my lambs of this year have been subject.

Amongst your numerous and enlightened correspondents, I hope some may be found capable of explaining the nature of this complaint; and should they know of any remedy by which the disease may be cured, they will confer a particular obligation on me, and probably on many others by having the kindness to communicate it through the medium of your Journal.

The complaint appears to be wholly in the loins: none of the lambs were subject to it till they were many weeks old, and, when first affected, were very ricketty, and in a short time reeled so much in their hind quarters, as to be able to walk but a short distance without falling; and the disease has generally so speedily increased, as to make them incapable of getting up, when it was of course necessary for me to kill them.

My flock is of the Merino breed, but I conceive the sort of sheep can have nothing to do with the cause of disorder.

If you, Mr. Editor, or any of your correspondents, will favour me with their sentiments as to the cause, as well as with their advice what measures to adopt respecting it, I shall be most thankful, and I am Sir your obedient servant,
JOHN LEECH.

☞ The disorder is so prevalent in some countries as to preclude breeding with profit and success: in comparative instances that we have noticed, it appeared to be occasioned by the poverty of the ewes in winter, and is often fatal to three fourths of the flock. It is called in the Fens *cockspring*, from the vulgar name of a plant growing early in spring by the sides of ditches, the eating of which erroneously supposed to cause it. This plant is the *reed canary (phalaris arundinacea)*, and is very innocent and agreeable food to young stock in spring, when grass is scarce. The disease is a species of *tabe dorsaliz*, or consumption of the spinal marrow, and evidently affects the head in its progress, producing a wildness of look, and a *clearness* (or bloodless appearance) of the eye. It is wholly incurable, and the lambs which are seized ought to be killed at first: they will sometimes be in good condition, inclining to fat, and very good meat: we have slaughtered them at eight or nine weeks old, to weigh from 6 to 8 lb. per quarter. The way to prevent it is to keep the ewes in fair condition through the winter, and not to let them winter on low or cold land, without a preparation in a corner for lodging, and some dry food, with a little salt, to *wont* them to their lair.—*Editor Farmer's Journal.*

ON UNDER DRAINING.

Suffolk, May 12, 1821.

Sir,

I should wish to be informed, through the medium of your valuable Journal, the advantages derived from *under draining rich old pastures* (subsoil strong clay), as opinions amongst eminent agriculturists are much at variance as to whether, or not, any benefit is derived from *under-draining any description of pasture land.* I am, Sir, your constant reader, &c.
A SUFFOLK FARMER.

☞ *Query to the Querist.*—Does the water, after heavy rains rest any where long on the surface?—*Editor Farmers' Journal.*

ON THE MISAPPLICATION OF THE COLUMNS OF THE FARMERS' JOURNAL.

Bedfordshire, May 4, 1821.

Sir,

In common with many of your readers, I am sorry to see that a very interesting and useful portion of The Farmers' Journal, which has been usually devoted to Notices or short Reviews of Essays and other publications bearing directly on practical agricultural subjects, of late almost discontinued by you: the remarks with which you have hitherto introduced the readers of The Farmers' Journal to new interesting agricultural publications have been alike distinguished for great ability, candour, clearness, and precision; thereby acting as a safe guide to your numerous readers in selecting such publications as are of real practical value.

Impressed with these ideas I send to your notice an Essay on the diseases of the eye of the Horse, by James Wardrop, Esq. Surgeon extraordinary to his Majesty. It is from the hands of such men of science, who stand at the head of their profession, that the practical man can look for first principles, as the leading guides of his practice, and by which he can never be misled. To those who are acquainted with the deplorable deficiency in the practice of country farriers, or *leeches*, the score of humanity will be more than a sufficient reason for extending by every means the knowledge of the diseases of the eye of the horse; and when the importance of that noble animal to agriculture is superadded, it becomes a duty of every friend to the art to render his assistance however small, to the furtherance of so desirable an end. As you have my name and address, I have only to say with how much respect I am, Sir, your obedient servant, S—r.

☞ We can assure this esteemed correspondent that we are very much of his opinion, excepting as to the praise he is pleased to bestow on us. Nothing would give us so much satisfaction as the rational pursuit of agricultural improvement, were those engaged in it enjoying that comfort and security in their avocation, and that reward for their labour to which industry and skill are entitled, and which their importance to the public welfare renders indispensable: the controversy, however, is now at an end, although we are yet to learn the event. The treatise above mentioned is a most excellent one, and we shall shortly extract from it the practical treatment of inflammation.—*Editor Farmer's Journal.*

ON IMPROVING THE BREED OF HORNED CATTLE.

"We want only such a standard of value as is proportioned to our political and financial state, to render all other contrivances unnecessary."—*The Farmers' Journal, May* 7.

Akehead, May 11, 1821.

Sir,

Your sensible reporter for Durham has remarked, "that ruinously low prices deprive us of all hope from the fruitful appearance of our fields; and we do not hesitate to say, that nothing but ruin can be the inevitable fate of nine tenths of the cultivators, if some efficient remedy be not applied speedily to stay the overwhelming torrent of disaster." This is very true. I have long been of opinion, that if we are to have low-priced gold, low priced labour, and low-priced corn, our knowledge in practical agriculture would prove useless, because the relations of industry would be broken up and destroyed, by the overthrow of our personally religious and civil institutions. Indeed, I hold this as a regular and certain effect arising out of low prices.

But the arguments of my honest and industrious neighbour, farmer Jobson, has taught me to hope that I have looked too much on the gloomy side of the shield. Well, then, as my voice has been every where closed on the Currency Question, and as that question does not involve my personal interests further than as a member of the whole community, I shall for a moment step out of the mazy paths of political economy, and turn my attention to what is ten thousand times more congenial to my mind—practical agriculture. But the arguments of farmer Jobson may be worth recording.

"I can see clearly enough," says he, and he spoke feelingly, for he had the appearance of one interested, "the present race of farmers must be

AGRICULTURE.

Maryland Cattle Show, No. 2.

FIRST DAY.

The exhibition held on the two last days of May, by the Maryland Agricultural Society was attended by a great number of Farmers and Citizens who appeared to take an increased interest in the concerns of agriculture: this is as it ought to be. The silent and unostentatious life of the farmer deprives him in a great measure of those adventitious stimulants to action, which are found in the plaudits and cheers of our fellow men, in other walks of life.

The successful merchant upon change, the skilful seaman returning from his fortunate voyage, the eloquent advocate in the crowded court room, the politician, and the soldier all receive an immediate reward for their exertions, in the notoriety and applause which follow them. Not so the husbandman. In the retirement of the country he pursues his round of toil, and the satisfaction he feels at the success of his plans is now and then increased by the approval of a friend or neighbor; and when he lights upon some new discovery or improvement, how long does it remain confined to his own practice, or too often perish with him? It is the business of agricultural associations to supply all these deficiences, and none of us can look back for a few years without acknowledging the benefits produced by them. On the barren hills and exhausted fields in some parts of Maryland, where alternate crops of Indian corn and tobacco, without any intervening meliorating course, had exhausted every principle of fertility, the introduction of plaster, clover and other artificial grasses has been followed by profitable and frequently luxuriant crops.

Our instruments of agriculture are receiving daily some improvement, and every combination and invention of Mechanics have been put in requisition to save animal labour. Foreign countries are searched for the best seeds and plants, and the most improved breeds of domestic animals are imported. By analyses the demands of our different soils are now particularly ascertained, barren clay is found by the agency of fire, (the most destructive of the elements) to give nourishment and strength to an exhausted soil, and having been for centuries so long cultivating the surface, it is now proposed to go deeper and till as it were a layer or stratum under ground.*

On the present occasion it was highly satisfactory to observe how fully the committee of arrangement had availed themselves of the experience afforded by the former and first attempt. The chief defects developed on that occasion were now removed, and all their previous arrangements for the show were seen to glide at once into full and fair operation. The Judges to award the Premiums appeared on the ground at an early hour, and being furnished with a warrant of authority and a designation of the objects to undergo their examination and award, every one entered apparently with the greatest cheerfulness on the performance of the duties assigned him. To each committee a marshall was appointed, by whom all the members were collected and made known to each other, and the whole business of the day was entered upon without interruption or delay. The proceedings were moreover very much facilitated by the way in which the enclosures were arranged. The pens formed a hollow square, each one being numbered and distinctly labelled with the name of the animal, its owner, its pedigree, and for what premium exhibited, &c.—and the members of the agricultural society, strangers from other states and the owners and attendants on the animals exhibited, were only permitted to enter within the square. Every one was however, invited to become a member on payment of $2 per annum, and if he felt too little interest in the success of the Society to enter it on these terms, he was still at liberty to view the animals on the outside, as the members did from the inside of the square formed by the pens. The committee of arrangement in their address to the public, stated the absolute necessity of adopting some such regulation, and the order in which the business of the day went on fully proved its great advantage.—Recent experience will no doubt enable the society to rectify some of the inconveniences which were found to exist; but on the whole, the order and regularity preserved, was highly gratifying.

The forenoon of the first day was occupied in examining and discussing the points and qualities of the numerous fine animals, implements of husbandry, &c. and at one o'clock the stallions hitherto confined in their stables, were led out under the bridle, and paraded before the judges and the society, and made truly a magnificent display, exhibiting samples of the best blood of that noble animal; at two, the society dined together in harmony and satisfaction, and while the judges retired in the afternoon to make up their reports, other members were agreeably occupied in interchanging sentiments, and congratulations on the prospects of the society, and the improving interests of the plough.

The presence of distinguished strangers gave much satisfaction, and many gentlemen from all parts of the state, meeting their friends and acquaintances, made the day pass very pleasantly.

SECOND DAY.

On this day at an early hour a great concourse assembled in a neighbouring field, appropriated by Mr. Skinner, for the first regular ploughing match, conducted under the management of the society, and this proved as it deserved to be from its objects and the manner of conducting it, one of the most prominent and interesting features in the whole exhibition. The paramount importance of the implement to be tested, the novelty of the competition, the beauty and excellence of the operation, the steadiness and skill of the ploughmen, the close and critical investigation of the judges by the application of various accurate tests, all tended to inspire the by-standers with the most lively and agreeable impressions The result of that contest, as well as their decisions as to implements generally, will be seen in the report of the viewing committee.

About one o'clock on this day the several committees were summoned to attend the President with their reports, which were read by the chairman of each respectively, and the premiums were severally delivered to the successful competitors by the President of the Society with appropriate remarks of commendation to each and of encouragement to others to follow their good example.

REPORT ON HORSES—STALLIONS.

The Committee appointed to examine and award premiums to stallions and brood mares, report, that they have carefully and with great satisfaction, viewed the fine animals of both these descriptions exhibited for premium, and are of opinion that Robert Wright, Esq. of Queen Anne's county, is entitled to the premium of a silver pitcher, valued at $30, for his stallion Silver Heels, and that John Perdue, Esquire, is entitled to the premium for the second best stallion—for his grey horse, Young Sportsman They beg leave further to recommend the appropriation of one of the discretionary premiums set apart for objects not coming within the specified limits of competition, to R. Patterson, Esq. for his imported horse Exile.* The Committee cannot pass without notice some beautiful young stallions; especially one exhibited by Gen. Ridgley, of Hampton, and two by R. Caton, Esq. all pure and fine specimens of the best English racing stock, and well qualified to impart some of the most indispensible qualities for the saddle, or the harness—such animals are the more valuable as, in the apprehension of the Committee, they are of late years becoming more rare. The reputation and performances of Mr. Lawrence's sorrel stallion, Tuckahoe, were too well known for him to pass in review without attention and admiration; but having been bred in another state, as well as the fine horse Fagdown, property of Mr. Boyce; and Mr Enson's stallion, the Committee are precluded from considering them as competitors for premiums, and can only recommend them as animals of great merit, entitled to the notice and patronage of the public.

BROOD MARES.

The Committee award to Mr. Jacob Hollingsworth the premium for the best brood mare; and to Mr. Robert T. Messer the premium for the second best—mares of distinguished merit were also exhibited by Messrs. Owings, and Rogers; a very valuable animal of this class, the property of Mr. Lewis, did not come under the notice of the society until the second day of the show. The Committee recommend as worthy of a discretionary premium, a grey mare, Miss Fanny, not bred in the state, property of Samuel W. Smith, Esq.—

ROBERT LYON,
ROBERT N. MOALE,
JOHN COX,
WILLIAM POTTER,
ALLEN THOMAS.
Committee.

* Mr. Patterson's Exile is one of the Cleveland bays, which are very much noticed in England. The qualities of this breed consisting as they do in the union of strength and fleetness, and the capacity to endure fatigue, and to carry high weights, are well adapted to our purposes—and the extreme difficulty we meet with in procuring a horse answering to the English hunter, is sufficient to prove that the mixture of the heavy Pennsylvania wagon breed with the blooded horse, cannot be depended on for that object: Mr. Patterson was enabled to procure this horse through means which are accessible to few—and we think the admirers of the English hunter and coach horse are under many obligations to him. We hope the stock will be generally spread in the country, as we are confident that for carriages of quick draught, it will eventually prove to be very superior; and it is much to be desired that the entire blood should be secured to our country by the importation of one or more mares of the same stock.

REPORT ON ASSES AND MULES.

The Committee appointed to examine the Asses and Mules exhibited for premium, do award as follows:

To. Mr. B. O. Tayloe the first premium for his Jack three years old, called the Duke of Wellington.†

To Mr. George Howard of Waverly, the first premium for a three years old mule.‡

The second premium to Mr. George Howard of Waverly, for a mule very little inferior to the former.

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* *See the remarks on the Substratum plough in the Report of Implements, &c.*

The Committee regret that no premium is at their disposal for the very fine Maltese Jack, Don Carlos, imported by S. Hambleton, Esq. of the U. S. Navy; but they recommend him earnestly for a discretionary premium, and are of opinion that Mr. Hambleton with many other officers in that service, are entitled to the thanks of the agricultural community for many public spirited and patriotic acts of this kind, whereby the interests of agriculture must be essentially and permanently promoted,

ROBERT PATTERSON,
CHARLES S. RIDGLEY, } Committee.
JOHN HUNTER,

† Mr. Tayloe's Jack, the *Duke of Wellington* was foaled in Charles county, Md. in June, 1819, and is descended from Gen. Washington's famous *Royal Gift*: besides his size and figure, he has proved himself by his offspring, the owner having several fine young Jacks by him nearly a year old.

‡ Mr. Howard's mules belonged to a team of six, which were driven to the ground in the wagon, with a full load of plaster of paris. They were exhibited as they arrived, in their working gear; and it is doubtful if a team of five in number has been exhibited in this country equalling them in size, symmetry, fine condition, and efficiency.

REPORT ON NEAT CATTLE.

The Committee appointed to examine the neat cattle exhibited at the second annual meeting of the Maryland Agricultural Society, and to award the premiums for that stock,

RESPECTFULLY REPORT,

That, according to their best judgment, they have decided as follows:

For the best bull under two years of age, they award to Gen. Ridgely, of Hampton, the premium of a piece of plate of the value of $15 for his bull of seventeen months old, said to be a full blooded Alderney. They considered him a very well grown and fine animal, but from his form and points, they cannot but presume that there must have been some accidental cross in his breeding.*

For the second best bull under two years old, they award to Mr. James Carroll, Jr. the premium of a piece of plate of the value of $10, for his bull of 12 months old—a cross of the Alderney on the Bakewell and Dutch breeds.

Understanding it to be within the discretion deligated to them, the Committee have awarded no premium for bulls over two years old; no animal of that description having been offered, which in their opinion had any pretentions to uncommon size or points.

For the best milch cow, they award the premium of a piece of plate, of the value of $20, to Mr. Henry Thompson for his Dun Coloured Cow, six years old, descended from English and Dutch stock, remarkable for her size, form, and quantity of milk.

For the second best milch cow they award the premium of a piece of plate of the value of $10, to Gen. Ridgley, for his Black cow six years old, distinguished for her size, shewing good points as a milker, of the Dutch breed, from among four fine cows, and several good heifers exhibited by that gentleman.

For oxen, the Committee determined not to adjudge a premium, there having been none presented to their particular notice.

There were offered a number of very fine heifers which did much credit to their respective breeders. Governor Wright exhibited a very large one of two years of age; and Mr. Job Smith shewed a well grown heifer of many very good points—the Committee, however, could but in their opinion award,

For the best heifer, a piece of plate of the value of $15 to Mr. James Howard, for his brindled-pied heifer two years old, of fine size, exhibiting strong points; and apparently of the Bakewell stock.

For the second best heifer they award to Mr. G. W. Thomas of Chestertown, a piece of plate of the value of $10 for his white heifer fourteen months old, and of great weight.

Mr. George Calvert exhibited a singular instance of early bearing in a every handsome heifer in good condition, no more than fourteen months old, with a calf by her side of the age of seven weeks, so that she produced her calf as nearly as may be at the age of twelve months.§

Mr. J. S. Skinner, shewed a very heavy and finely formed Alderney cow-calf of seven months old, of great promise for another year.¶

Mr. Patterson's well known Devon stock presented by Mr Coke of Norfolk, England, were on the ground, and much admired by the Committee, and all who saw them—as they cannot cease to be for their beautiful shapes and good qualities.

The young short horned bull, belonging to Mr. Lloyd N. Rogers, forcibly struck the attention of the Committe. His size, his general form, and many of his points are good; and he will no doubt become a valuable animal for propagating the milking race.

The Committee in concluding their report, cannot omit to congratulate the society on the opportunity afforded by the exertions of Mr. J. S. Skinner, of viewing the remarkably fine specimens of this kind of stock recently imported by him, and now exhibited—a young bull and two heifers of the English improved short horned breed. These animals (not yet two years old) in the opinion of the Committee can hardly be spoken of in terms too high, and are a real acquisition to the country. They were bred by Mr. Charles Champion of Blyth, near Bawtry in Nottinghamshire, England, and come direct from his hands to Mr. Skinner. They are of great size, fine forms, and combine the very estimable points of aptitude to fatten, and of deep milking; and last, though not the least, that remarkable quiet habit, and good temper so much valued by the best breeders, which not only makes it convenient and safe to feed and milk, but which contributes much to the disposition to fatten, and to which no doubt, may be attributed in a great measure the fine condition in which they now appear, although only little more than a week since they landed from on shipboard.*

As in the opinion of the committee, the society are alike indebted to Mr. Skinner, for opening a correspondence on this interesting subject with Mr. Champion, a justly celebrated breeder in England; and to the latter gentleman for the entire justice he has done to the expectations of the importer, in the selection of the animals sent him—

They beg leave to recommend this successful effort to improve the stock of our country, to the special notice of the society, in such a mode as they may deem best calculated to encourage similar introductions, and to reward the present enterprize.

There were shown also by Mr. Skinner, a pair of animals of singular character, and heretofore unknown in this country, a bull and cow of the Tuscan breed, said to be fitted in an eminent degree for the yoke. They were selected in Tuscany, and brought to this conntry last year by Commodore Bainbridge, and S. Hambleton, Esq. of the U. S. Navy. Actuated by the laudable desire of contributing to the introduction of useful animals, they ceded them to Mr. Skinner at the original cost, who in the same spirit has disposed of them to Mr. John Middleton of South Carolina. The committee will not undertake to determine how far it may prove advantageous in this country to give up in neat cattle the properties usually most sought for, to obtain a breed principally fitted for working oxen, but for this qualification, these animals promise much, particularly as to the Southern States. It is fortunate that they have become the property of a gentleman in that quarter in whose hands the society may be confident, the experiment will be fairly made.

J. MASON,
JOHN HARE POWEL,
I. CHAUNCEY.
JOHN BARNEY,
SAMUEL JACQUES, Jr. } Committee

After the reading of this report and the delivery of the premiums awarded by it, the following resolution was offered by George Calvert, Esq. and unanimously adopted by the society. Resolved that a committee of three members of this society be appointed by the President thereof, with authority to procure and present to J. S. Skinner, Esq. three pieces of plate, of the value, one of fifty dollars, and two of twenty-five dollars each, in token of the belief entertained by the society, of the great improvement in the stock of neat cattle which must result from the importation by him of the bull Champion, and heifers White Rose and Shepherdess, bred by Charles Champion, Esq. of Blythe near Bawtry in Nottinghamshire, England; and Genl. Ridgely of Hampton, Henry Thompson, Esq. and Doctor Allen Thomas were requested to perform this service in behalf of the society.

REPORT ON SWINE.

The committee appointed to examine the swine exhibited for premium, report that Mr. Jacob Councilman, Colonel William Potter, and Mr. Lloyd N. Rogers, exhibited for premium three boars.

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* *The Alderney cattle exhibited at this show were descended from the importation made by Mr. Creighton. That importation, it is true, was made up of the best of the kind to be procured; and it may reasonably be supposed that it would furnish the fairest specimens, which are therefore not so liable to the animadversions made in the English books on the size and form of the Alderney in general.—"I was assisted," says Mr. Creighton "in the selection of them by Col. M'Rea, of the Royal Invalids (in Guernsey) and by the governor, Col. Le Messurier (in Alderney)—They are of the pure Alderney breed."*—Vide Amer. Farmer, Vol. 2nd No. 13.

After all, the merit of these Cattle will be settled by time and experience. At the present exhibition, the Alderney held a good place, though their chief value consists in the richness of their milk. The premium bull calf, President, mentioned above, weighed 1204 lbs. the day before the Show, and was sold to a gentleman of Hagerstown, Maryland.

§ *At the Cattle show at Brighton, Massachusetts, there was a heifer of the Galloway breed exhibited, which brought her first calf at 17 months and eleven days old—and her second calf at two years and four months old—see page 245 of the Am. Farmer, Vol. 3d.*

¶ Sold to Commodore Chauncey, who now has full blood of both sexes.—*Edit. Am. Far.*

* *Sold to Col. Lloyd.*—Edit. Am. Far.

That the boar of Mr. Councilman was eleven months old, raised on clover. The committee award to him the first premium of a piece of plate, valued at ten dollars.

To Colonel William Potter for his boar, fifteen months old, grass fed, and sired by his boar that took the premium last year; the committee award the second premium of a piece of plate valued at Five Dollars.

Mr. Lloyd N. Rogers offered a fine sow, ten months old, and sister to the boar he offered. To her we award as justly entitled to it, a piece of plate valued at ten dollars.

We think that a cross by the boars of Mr. Councilman or Colonel Potter, would be an improvement of both breeds, as it would combine their excellencies for size and early growth, and the character of the sows for being easily kept fat.

ROBERT WRIGHT,
ROBERT SINCLAIR,
GIDEON DAVIS,
Dr. HENRY HOWARD, Committee.

N. B. Mr. Lloyd N. Rogers' hogs were of Cobbett's breed, "give the Devil his due."

REPORT ON SHEEP.

The Committee, appointed by the Maryland Agricultural Society, to inspect the sheep exhibited at their May meeting, have performed the duty assigned them, and have awarded premiums as follows:

For the best full-blooded Merino Ram, to Gen. John Mason, of Analoston Island, D. C., a premium of a piece of plate, valued at $10

For the best Ram of any other breed, to Samuel Brown, Jr., Esq. of Elk Ridge, Anne Arundel county, a premium of $10.

For the second best Ram of a different breed from the Merino, to Gen. Charles Ridgely, of Hampton, a premium of $5.

The Committee beg leave to remark, that in awarding the above premiums, their decision has been governed, in relation to the Merino sheep, by the quality of the wool:—and in relation to the other breeds of sheep, chiefly by the size and shape of the carcass.

The committee viewed with great pleasure fourteen ewes and two rams of the Bakewell breed, and also an ewe and lamb, of the same breed, exhibited by Mr. Barney of Port Penn, Delaware; but which could not be offered for a premium, not being raised in the state. All these fine sheep merit unqualified praise.

The Committee also inspected with much satisfaction, two broad tailed Tunisian sheep, presented by Commodore Jones, and Lieut. Booth, to J. S. Skinner, Esq. but to which, not being raised in the state, no premium could be awarded.

The Committee cannot close this report without expressing their warm approbation of the public spirit of those gentlemen, who have, on the present occasion enabled the society to see, and the country to reap, some benefit from sheep of several foreign breeds, for which, according to their rules, no premiums could be assigned.

V. MAXCY,
BENJAMIN F. MACKALL,
GEORGE CALVERT,
J. BANISTER,
J. YELLOTT, Jr. Committee.

The letter in which General Mason announces his intention of sending his sheep to the exhibition, contains so much valuable information to the purchaser and the breeder of sheep, that we have subjoined it below.‖ It is gratifying to find that the pure Merino blood has been preserved at Analostan; and still more satisfactory to have so convincing a proof that the Merino does not necessarily degenerate in our climate. The youngest ram of the two, offered by Gen. Mason, was particularly of fine size and figure. As the rage for Merinos was at one time carried to excess, so the re-action was too violent. The recent sales of wool imported from Europe, would indicate that it is time for us to resume that attention to our flocks which the progress of manufactures in the country demands. The cotton manufacture is light and cleanly—that of wool, heavy and greasy. The former has established itself fully, and is popular; the latter is demanded by the increasing worthlessness of the coarse woolens sent from England.

‖ *Analostan Island,*
May 26th, 1822.

Dear Sir,

It is my intention if the weather continues to be cool, to send a couple of Merino Rams to the approaching Cattle Show of the Maryland Agricultural Society, and in compliance with one of its rules, I now give you an account of their pedigree, and of the manner in which they have been fed and reared.

They were both bred at this place, and are yet owned by me.

In the year 1811, *I imported myself some Merinos, and purchased from the importations of others, a few selected from each, as they were landed, and thus formed a small flock, made up of the Paular, Infantado, Guadeloupe, Viadillo, and Montarco sheep, known to be among the best fine wooled flocks in Spain.*

This stock I have ever since kept here under my own eye, and so preserved a little colony of pure Spanish blood (as my insular situation conveniently enabled me to do) uncontaminated by any other mixture:—sending out from it to my other farms, the stock rams, and drafting from it every year for crossing at these, any excesses of the number limited by the means of this small farm—retaining always for the breeding stock the individuals, found to have the finest and closest wool. As long as the imported sheep lived, I was in the habit of so marking their intermediate descendants as that the intermixtures of the Spanish flocks I have mentioned, could be at once ascertained in each case—thus the older ram now to be sent, is known to be from a Guadeloupe ewe, by a Paular ram: the younger is of a deeper compound, not now to be traced. As to the manner of rearing and feeding, my practice of late years has been to feed less plentifully than heretofore, not only because it is more economical, but because I am satisfied from attentive observation, that although high feeding gives heavier coats, it produces coarser wool. I prefer now, for Merinos, short pastures in summer, and give them but little grain in winter; believing that to keep them uniformly in good heart throughout the year, and at no time very fat, is the way to obtain fleeces of the softest description, as well as of the finest fibre.

For the lambs, however, intended for stock rams, I make somewhat a better provision during the first fall and winter. I have them put immediately after weaning, in company with a tamed bell-weather, on good grass lots, where they get abundance at all times, except when the ground is covered with snow, and during the hard weather, give them daily one or two feeds of grain. The two rams now to be sent—one four, and the other one year old have been thus treated—but the older, which is one of my stock rams on a neighbouring farm, in a flock of 150 *sheep, has had no more than the common fare just described; and, that neither has been particularly prepared for the occasion, is certain; as I can asure you, with great truth, that it was only during the last week, that they were selected for sending.*

Very respectfully,
I am Sir,
Your ob't serv't
J. MASON.

To J. S. Skinner, Esq.

We may here notice a piece of superfine blue cloth, which was exhibited by Mr. James Sykes. It was manufactured by that gentleman at the Franklin Mills, in Baltimore county, was of the finest wool, very well dressed, and of a beautiful blue colour. It had been dyed in the woad vat, and of course as he stated, the dye was permanent. It attracted the attention, and unqualified admiration of the society.

On the whole, the shew of sheep was very good, and embraced the best sorts. The Merino for fleece, and the Bakewell or Dishley for carcass, had the preference as usual; of the former there were several fine specimens, besides those of General Mason.

REPORT ON AGRICULTURAL IMPLEMENTS, MACHINES, &c. &c.

The committees to whom has been referred the examination of ploughs, straw cutters, drill machines, and "machines or models of machines," for preparing flax from the unwretted state for the wheel, respectfully report, that, they found it necessary to establish certain principles to govern them ln their decision as to the merits of the articles submitted to their examination.

The first object of inquiry in all cases was efficiency; and the next, simplicity of construction, cost and durability.

The objects first requiring their attention was the machines for cutting straw, and to enable them to arrive at some certain conclusion as to the first inquiry, they required the candidates for premiums to submit their experiments to the test of a stop watch, and are of opinion that the one, the invention of which, is claimed by Mr. Jonathan Eastman, cuts the greatest quantity, of any exhibited, in the shortest space of time, and seems well adapted to the cutting of all kinds of food for stock. On farms of great extent and with careful hands this machine promises great advantage.

The machine of Mr. Sinclair ranks next in efficiency, as the quantity cut by it was not far short of that cut by the other; and the latter, besides doing the work with great neatness, was more simple in its construction, being such as may be made in general by common mechanics.

The next in order was a very simple machine made by Mr. Grafllin, from a model furnished to the Editor of the American Farmer by Mr. *Minor* of Virginia, who states it to be an Italian invention introduced into this country by Mr. *Jefferson*. This instrument seems to combine all the advantages of cheapness, efficiency and simplicity, doing a greater quantity of work in proportion to the original cost, than either of the others without the same liability of being put out of order, with this additional advantage, that it may be constructed and kept in a state for service, by the most ordinary workman, and is well adapted to the cutting of all kinds of long food for stock. The machine of Mr. *Eastman*, costs $60, that of Mr. *Sinclair*, $15, and that of the introduction of Mr. *Jefferson*, from 10 to $12.

The committee, however, are of opinion that although all and each of the machines possess great merit, neither of them have full claims to *original* invention, and therefore are not *fairly* *entitled to a regular premium.* But that of Mr. *Eastman* possesses most of novelty in its construction, and is entitled to the notice and encouragement of the society, as well for its ingenuity as for its utility, while the others deserve no less for their *simplicity* and *cheapness.* The committee taking into consideration the great efforts of Mr. *Eastman* to bring his machine to perfection, and his successful attempts thus far, beg leave to award him the premium allowed to the *best* straw cutter.

The next object of enquiry was drill machines; but there being none on the ground coming properly under this denomination, the committee were induced to examine two machines of a similar character offered by Mr. *Sinclair*, for the purpose of sowing plaster, clover, and other seed: the merits of one of them was rendered manifest by actual experiment, and by letters from gentlemen of high respectability who have used it. Of this machine, Mr. *Sinclair*, claims the invention and the committee confidently recommend it for a premium under the impression that it may be advantageously employed for the sowing of all kinds of grain. Attention was next drawn to a neat "machine or model of a machine for preparing unwretted flax for the wheel," offered by Mr. *Grafflin*:—This "machine or model," promises many advantages in domestic economy, by an easy and expeditious mode of preparing the raw material, but as the proprietor had no flax on the ground, they could not satisfy themselves by actual experiment. They think it, however, worthy the encouragement of the society and fairly entitled to the premium, there being none other opposed to it. The committee were shown some hemp and flax, said to have been prepared by the machine, which had the most beautiful appearance.

The attention of the committee in the course of their examination was invited towards a machine for slicing all kinds of roots for cattle, which unites in itself great strength, utility, cheapness, simplicity and rapidity of work; according to actual experiment at the rate of 60 bushels of potatoes an hour, with the labor of one man, may be prepared, cut in thin slices as food, and this too without any extraordinary labour or exertion, as the machine may be worked expeditiously by a small boy. It has the appearance of original invention, and the committee beg leave to recommend that one of the discretionary premiums be given Mr. *Grafflin*, who deserves great credit for his collection of a variety of root cutters, from which the farmer may supply himself to suit his wants and circumstances.

Of the agricultural implements, in general exhibited, the committee feel it due to speak in the most favourable terms:—most of them bespeak great ingenuity in the inventors, and all by their neatness do great credit to the workmen in general. The variety brought to the ground, applicable to all farming purposes, served to show the great interests which have been excited by agricultural societies, in general, and was highly creditable to the one of which we have the honor to be members. Those of Messrs. *Davis*, *Ford*, *Sinclair*, *Chenoweth*, and *Grefflin*, were particularly worthy of notice. *Wood's* plough also took its place in the exhibition; it had gained such great celebrity, however, that it was not thought necessary by the proprietor to test, any further, its merits.

After a careful examination of the ploughs in operation, tested by the dynanometer, the Committee have come to the determination that the premium should be awarded to Mr. William Brown of Brooksville, Montgomery county, Md. In 32 minutes of time, Mr Brown's plough went over a space of ground 330 feet long, 21 feet, 8 inches wide, running a furrow one foot wide and six inches deep; carrying a resistance of 500 pounds. Price of this plough $15—Mr. Hink's plough in 32 minutes went over a space of 330 feet long, 17f. 3½ inches wide, carrying a furrow of the same width and depth, and having a resistance of 528 pounds; price of plough $14.

Mr. Davis' went over a space of 330 feet long, 19 feet 6 inches wide, carrying a furrow of the same depth and breadth, in the same time, and having a resistance of 500; price of this plough, $14.

Those were the only ploughs fairly in competition, and which came fully under the observation of the committee—other ploughs were turned in however, more for the satisfaction of the owners, than for inspection, and the performance in general was remarkably fine, and the work in all cases done with great neatness and expedition. It is due to Mr. Davis, to say, that his plough is plain and simple, and of course cheap, and from appearances, not liable to get out of order easily.

The committee had an opportunity of witnessing the performance of an implement of husbandry entirely new to most of them, and worthy of the attention and encouragement of the Society and of agriculturists in general. It is known by the name of the Substratum plough, and is used for loosening the subsoil after the common plough, and holds out every inducement to believe that immense advantages may be expected from it, by affording greater depth of tilth to hold moisture and nourishment for the roots of plants. This implement was offered by Mr. William Brown, for a premium, and in the opinion of the committee, it is fully entitled to one.

D. PORTER.
W. POTTER.
JOHN MARSH
TENCH TILGHMAN.
ROGER BROOKE.
Committee.

Mr. Watson of Hagerstown exhibited two Wheat Fans of a construction very much approved, in that part of the country, and which he sold readily on the ground.

There were several ploughs of Messrs. Sinclair, Chenoweth and Ford present, which are well known to agriculturists. They obligingly turned in their ploughs, and added to the interesting scene—but were not competitors for a premium, owing to an alteration of the ground which was first designated by the committee of arrangement and for which those gentlemen had prepared themselves with *three horse* ploughs. Mr. Sinclair has established a manufactory of implements of husbandry, near the water on the most frequented wharf in Baltimore, which does him great credit, and will be of general use:——the invitation held out to improvement by such exhibitions of agricultural tools, sold at fair prices, is very considerable. The ploughs of Chenoweth, years ago, might be occasionally met with in all the counties lying on the Chesapeake—The plough prepares the way for other nice and more improved implements, and we hope the advances that are now making will be progressive until they reach the Drill husbandry—The soil of many of the counties on the Chesapeake is light and easily pulverised—in others where it is more tenacious, it is level—and in almost all, it is free from rocks and stones. Norfolk county, in England, with naturally a light and sandy soil, has been changed by the drill into one of the best grain countries: and 35 or 40 bushels of wheat to the acre is by no means unusual from that cultivation.

DISCRETIONARY PREMIUMS.

The committee to whom was referred the award of discretionary premiums respectfully report, that they have awarded—

To Robert Patterson, Esq. for his imported thorough-bred Cleaveland bay horse *Exile*, a piece of plate of the value of $20.

To Samuel Hambleton, Esq. U. S. Navy, for his imported Maltese Jack *Sancho*, a piece of plate of the value of $15.

To Mr. Brown for his substratum plough a piece of plate of the value of $5.

To Mr. Grafflin, for his Root Cutter a piece of plate of the value of $5.

The committee beg leave to remark that in awarding the foregoing premiums they have considered their power as restrained to those objects recommended by the several committees for discretionary premiums.

R. WRIGHT,
D. PORTER,
ROBT. LYON,
CHAS. STERETT RIDGELY,
V. MAXCY,
JOHN HARE POWEL.
Committee.

Several bottles of wine made of the native grape by Major Adlum were tasted, and met with the unqualified approbation of the society; a more particular account of this gentleman's praiseworthy attempt to introduce the cultivation of the grape, and the manufacture of wine may be given hereafter.

Several samples procured through Mr. Inspector Mackall, were exhibited of fine bright tobacco, raised in Frederick and Montgomery counties, which was sold readily in the Baltimore market at 30 to 35 dollars per hundred pounds.

The reports of the committees having been read and the premiums bestowed as therein awarded; the members sat down with good appetite to an acceptable dinner; and were afterwards, agreeably entertained by an address from their President, chiefly on the advantages of steaming food, for which they presented him with a vote of thanks, with the request of a copy for publication.

The officers of the society were then all re-elected to serve the ensuing year; a vote of thanks was passed in compliment to the committee of arrangement, and on motion, it was resolved, that the Society do now adjourn to hold a meeting next fall at Easton, agreeably to the constitution, and that a committee of arrangement for that occasion be accordingly appointed by the President and Vice President of the society.

JNO. E. HOWARD, Jr. Sec'y.

The most recreating and agreeable concomitant of these exhibitions have been the sumptuous and appropriate entertainments of distinguished agriculturists which ensued on the next day at *Hampton.* It is always, as it should be, the wish of the Society to offer every civility and attention to respectable strangers, who manifest their desire for the success of our exhibitions, by coming at a busy season, to visit them. But as must necessarily happen: the most active members of the society are much occupied with its particular concerns on the ground; and consolation was found in the assurance that distant and respectable visitors, would at Hampton, be made to forget and forgive any previous want of attention; for *there* they may expect to enjoy all the pleasures that flow from the liberal accommodations of a noble mansion, fine air, an extensive and splendid prospect of fertile country, and above all, a genuine and bounteous hospitality so happily dispensed, that all are inspired with one feeling towards their host, and agree that such men *deserve*, since they know how to enjoy, their wealth.

On Saturday a very numerous company began to assemble at Hampton about 3 o'clock, consisting of Naval Heroes, whose names are identical with their country's houour, of civil officers and statesmen, high in the publick service and confidence, and eminent citizens whose talents and usefulness command the respect of society. At dinner, the conversation turned chiefly on agricultural topics, interspersed with the proposals of appropriate sentiments from different gentlemen, all of which were cordially received; amongst other toasts that were drank with universal approbation, the following occur to us at present—

By Gen. Ridgley—The President of the U. S.

Success to the Maryland Agricultural Society.

The memory of William Pinkney.

The health of Sir John Sinclair—The enlightened friend and benefactor of agriculture, &c. &c.

After dinner the company walked over the grounds attracted by various interesting objects, and amongst others, the General's neat cattle of different breeds which are known to be very fine.

We should not have taken this brief and imperfect notice of the Hampton party, without the permission of the proprietor, did we not view it more especially as an *agricultural* excursion constituting an exhilirating and rational conclusion to the more formal proceedings of the society on the two preceding days. It will serve moreover to show, that the friends of the plough, as well as the more congregated members of other pursuits, can now be brought together for the discussion and improvement of their own affairs, that AGRICULTURE too, can have its rational festivities—its science, its literature, its rights, and its pleasures.

Edit. Am. Farmer.

* * *

From Thornton's Family Herbal.

THE OAK.

Uses.—Oak saw-dust is the principal indigenous vegetable used in dyeing fustian. All the varieties of drabs, and different shades of brown, are made with oak saw-dust, variously managed and compounded. Oak apples are likewise used in dyeing as a substitute for galls. An infusion of the bark, with a small quantity of copperas, is used by the common people to dye woollen of a purplish blue, which is sufficiently durable.

But the chief use of the bark of this tree is for the process of tanning. Before we detail the process, it may be proper to observe, that raw hides and skins being composed of minute fibres intersecting each other in every direction, the general operation of tanning consists chiefly in expanding the pores, and dissolving a sort of greasy substance contained in them; and then, by means of the astringency and gummy resinous properties of oak bark, to fill and reunite them, so as to give firmness and durability to the whole texture. But this theory has been controverted by some chemists, who suppose that the animal jelly contained in the skin is not dissolved, but unites during the process with the astringent principle of the bark, and forms a combination insoluble in water.

The process of tanning varies considerably, not only in different countries, but even in different parts of the same country. The following is the method most approved and practised in London and its vicinity, where the best leather is generally allowed to be manufactured.

The leather tanned in England consists chiefly of three sorts, known by the name of *butts* or *backs*, *hides*, and *skins*.

Butts are generally made from the stoutest and heaviest ox hides, and are managed as follows: After the horns are taken off, the hides are laid smooth in heaps for one or two days in the summer, and five or six in the winter: they are then hung on poles in a close room called a smoke-house in which is kept a smouldering fire of wet tan; this occasions a small degree of putrefaction, by which means the hair is easily got off, by spreading the hide on a sort of wooden horse or beam, and scraping it with a crooked knife. The hair being taken off, the hide is thrown into a pit or pool of water to cleanse it from the dirt, &c. which being done, the hide is again spread on the wooden beam, and the grease, loose flesh, extraneous filth, &c. carefully scrubbed out or taken off; the hides are then put into a pit of strong liquor called *ooze* or *wooze*, prepared in pits called *letches* or *taps* kept for the purpose, by infusing ground bark in water; this is termed *colouring:* after which they are removed into another pit called a *scowering*, which consists of water strongly impregnated with vitriolic acid, or with a vegetable acid prepared from rye or barley. This operation (which is called *raising*), by distending the pores of the hides, occasions them more readily to imbibe the ooze, the effect of which is to astringe and condense the fibres. and give firmness to the leather. The hides are then taken out of the scowering, and spread smooth in a pit commonly filled with water, called a *binder*, with a quantity of ground bark strewed between each. After lying a month or six weeks, they are taken up; and the decayed bark and liquor being drawn out of the pit, it is filled again with strong ooze, when they are put in as before, with bark between each hide. They now lie two or three months, at the expiration of which the same operation is repeated; they then remain four or five months, when they again undergo the same process; and after being three months in the last pit, are completely tanned, unless the hides are so remarkably stout as to want an additional pit or layer. The whole process requires from eleven to eighteen months, and sometimes two years, according to the substance of the hide and discretion of the tanner. When taken out of the pit to be dried, they are hung on poles; and after being compressed by a steel pin, and beat out smooth by wooden hammers called *beetles*, the operation is complete; and when thoroughly dry, they are fit for sale. Butts are chiefly used for the soles of stout shoes.

The leather which goes under the denomination of hides is generally made from cow hides, or the lighter ox hides, which are thus managed: After the horns are taken off, and the hides washed, they are put into a pit of water saturated with lime, where they remain a few days, when they are taken out, and the hair scraped off on a wooden beam, as before described: they are then washed in a pit or pool of water, and the loose flesh, &c. being taken off, they are removed into a pit of weak ooze, where they are taken up and put down (which is technically termed *handling*) two or three times a day for the first week; every second or third day they are shifted into a pit of fresh ooze, somewhat stronger than the former; till at the end of a month or six weeks they are put into a strong ooze, in which they are handled once or twice a week with fresh bark for two or three months. They are then removed into another pit called a *layer*, in which they are laid smooth, with bark ground very fine strewed between each hide. After remaining here two or three months, they are generally taken up, when the ooze is drawn out, and the hides put in again with fresh ooze and fresh bark; where, after lying two or three months more, they are completely tanned, except a few very stout hides, which may require an extra layer: they are then taken out, hung on poles, and being hammered and smoothed by a steel pin, are, when dry, fit for sale.

These hides are called crop hides: they are from ten to eighteen months in tanning, and are used for the soles of shoes.

Skins is the general term for the skins of calves, seals, hogs, dogs, &c. These, after being washed in water, are put into lime pits, as before mentioned, where they are taken up and put down every third or fourth day, for a fortnight or three weeks, in order to dilate the pores and dissolve the gelatinous parts of the skin. The hair is then scraped off, and the flesh and excresences being removed, they are put into a pit of water impregnated with pigeon dung (called a *grainer* or *mastring*), forming a strong alkaline ley, which in a week or ten days soaking out the lime, grease, and saponaceous matters (during which period they are several times scraped over with a crooked knife to work out the dirt and filth), softens the skins, and prepares them for the reception of the ooze. They are then put into a pit of weak ooze, in the same manner as the hides, and being frequently handled, are by degrees removed into a stronger and still stronger liquor for a month or six weeks, when they are put into a very strong ooze, with fresh bark ground very fine, and at the end of two or three months, according to their substance, are sufficiently tanned; when they are taken out, hung on poles, dried, and fit for sale.

These skins are afterwards dressed and blacked by the currier, and are used for the upper leathers of shoes, boots, &c.

The lighter sort of hides, called dressing hides, as well as horse hides, are managed nearly in the same manner as skins, and are used for coach-work, harness-work, &c.

It has been said that every part of the oak tree contains a great portion of astringent gummy-resinous matter, and will therefore tan leather as effectually as the bark itself. This opinion, which was first published in 1674 by the Hon. Charles Howard (Phil. Trans. vol. ix.), has since been countenanced by the celebrated Buffon; who adds, that the bark of birch will answer the purpose of tanning even sole leather, which, it is well known, requires the strongest and most penetrating materials.

A long memoir, written by M. Gleditsch, recommends the leaves, branches, fruit, and flowers; of a vast number of plants as substitutes for oak bark. Heath dried and pulverised, gall nuts, and the bark of birch, are said by M. Gesner to be used in different provinces of Germany. Abbé Nollet informs us, that the leaves of myrrh, are used by the tanners in Naples. In Corsica they make use of the leaves of wild laurel dried in the sun and beaten into powder, and in the island of St. Kilda they tan with the tormentil root. In some parts of Italy leather is tanned with myrtle leaves. In Russia it is said that leather is tanned with the bark of willow; and it may here be observed, that a late writer has recommended the extract of bark to be made in America, in order to lessen the expense of freight, &c. in conveying the bark itself to Europe.

In the year 1765, the Society of Arts, &c. granted a premium of £100 for the discovery of a method of tanning with oak-saw-dust; which method has been adopted in Germany: and the Rev. Mr. Swaine has lately revived the exploded substitute (mentioned by Gleditsch and others of oak leaves.

Anthony Day, esq. of London, obtained a patent, dated 17th July 1790, for a new method of tanning, "with half the bark in half the usual time." This plan chiefly consists in concentrating the bark into a strong extract, and in some mechanical improvements in the construction of the tan-yard. But neither the one nor the other has yet been adopted.

An ingenious manufacturer in London has, by the application of warm air, conveyed by means of flues from stoves properly constructed, and by other contrivances not generally known, considerably abridged the usual process of tanning. Some experiments have likewise been made with the bark of ash and of horse chesnut.

A substitute for oak bark, the price of which has lately been enormous, is the grand desideratum in the manufacture of leather. Most of these above enumerated have hitherto been found ineffectual; but a patent, bearing date 16th January, 1794, has been granted to Mr. Ashton, of Sheffield, Yorkshire, for his discovery of a cheap and expeditious method of tanning leather. This method chiefly consists in applying a preparation of mineral substances instead of oak bark. Those which, on account of their cheapness, are most to be preferred, are the dross of coalpits, called sulphur stones or pyrites, and the yellow ferruginous earth or red ochre; and, in general, all astringent, sulphureous or vitriolated substances.

If this discovery, which is yet in its infancy, should prove successful, it may cause a material alteration in the process of this manufacture; and, by reducing the expense, may ultimately be of great advantage to the public. Many other experiments are now making in England for the improvement of tanning; and as there are many persons of ingenuity and knowledge engaged in the leather manufacture, much may be expected from their industry and skill.

The revenue arising from the duty on leather tanned in Great Britain (exclusive of oiled leather) is upwards of £200,000 per annum.

MEDICAL VIRTUE.

The astringent effects of the oak were sufficiently known to the ancients, by whom different parts of the tree were used; but it is the bark which is now directed for medicinal use by our pharmacopœias. To this tree we may also refer the gallæ, or galls, which are produced from its leaves by means of a certain insect.

Oak bark manifests to the taste a strong astringency, accompanied with a moderate bitterness, qualities which are extracted both by water and by rectified spirit. Its universal use and preference in the tanning of leather is a proof of its great astringency, and like other astringents it has been recommended in agues, and for restraining hæmorrhagies, alvine fluxes, and other immoderate evacuations. A decoction of it has likewise been advantageously employed as a gargle, and as a fomentation or lotion in procidentia recti et uteri. Dr. Cullen tells us, that he has frequently employed the decoction with success in slight tumefactions of the mucous membrane of the fauces, and in prolapsus uvulæ, and cynanche tonsillaris, to which some people are liable upon the least exposure to cold: and in many cases this decoction, early applied, has appeared useful in preventing these disorders. It must be remarked, however, that the doctor almost constantly added a portion of alum to these decoctions.

Some have supposed that this bark is not less efficacious than that of the cinchona, especially in the form of extract; but this opinion now obtains little credit, though there be no doubt that oak bark may have the power of curing intermittents.

Galls, which in the warm climate of the East are found upon the leaves of this tree, are occasioned by a small insect with four wings, called *Cynips querci folii*, which deposits an egg in the substance of the leaf, by making a small perforation through the under surface. The ball presently begins to grow, and the egg in the centre of it changes to a worm; this worm again changes to a nymph, and the nymph to the flying insect abovementioned, which by eating its passage out, leaves a round hole: and those which have no holes are found to have the dead insect remaining in them.

Two sorts of galls are distinguished in the shops, one said to be brought from Aleppo, the other from the southern parts of Europe. The former are generally of a bluish colour, or of a greyish, or black, verging to blueness, unequal and watery on the surface, hard to break, and of a close compact texture; the others are of a light brownish or whitish colour, smooth, round, easily broken, less compact, and of a much larger size. The two sorts differ only in strength, two of the blue galls being supposed equivalent in this respect to three of the others.

Galls appear to be the most powerful of the vegetable astringents, striking a deep black when mixed with a solution of ferrum vitriolatum, and therefore preferred to every other substance for the purpose of making ink. As a medicine, they are to be considered as applicable to the same indications as the querci cortex, and by possessing a greater degree of astringent and styptic power, seem to have an advantage over oak bark, and to be better suited for external use. Reduced to fine powder, and made into an ointment, they have been found of great service in hæmorrhoidal affections. Their efficacy in intermittent fevers was tried by Mr. Poupart, by order of the Academy of Sciences, and from his report it appears that the galls succeeded in many cases; and also that they failed in many other cases, which were afterwards cured by the Peruvian bark.

Nor are we to wonder at this difference, seeing that Vanquelin has discovered a remarkable chemical difference between the bark and nut galls, the latter precipitating tartrite of antimony and infusion of cinchona, which are not acted upon by the former.

PRESCRIPTIONS.

R. 1. Take of oak bark, in pieces ounce ½,
————boiling water - a pint:
Let it remain for four hours, then strain; add to this
Alum in powder - - - a drachm:
To be used as a lotion cold to limbs after the gout, and also to scrophulous glands.

R. 2. Take of galls, in powder drachms 2,
————hog's lard - - - ounce ½,
Make into an ointment, to be applied by means of lint to the external piles, or even pressed somewhat up the fundament every night. This has done wonders in the piles, taking at the same time the following:

R. 3. Take of quassia, in raspings drachms 2,
————boiling water - - pint 1:
Let it remain three hours, strain:
To the strained liquor - - ounces 7,
Add, aromatic confection - drachm 1,
Ginger, in powder - - - scruples 2,
Take of this mixtvre two table-spoonsfull at twelve and seven every day.

How to make Ink.

A good and durable black ink may be made by the following directions:—To two pints of water add three ounces of the dark-coloured roughskinned Aleppo galls in gross powder, and of rasped logwood, green vitriol, and gum arabic, each an ounce. This mixture is to be put into a convenient vessel, and well shaken four or five times a day, for ten or twelve days, at the end of which time it will be fit for use; though it will improve by remaining longer on the ingredients. Vinegar instead of water makes a deeper-coloured ink; but its action on pens soon spoils them.

WOOL.

The following is the best mode of putting up the fleece:—spread it open with the inside down, fold in the skirts, begin at the tail and fold it up close and firm, until you come to the neck which twist into a rope and tie it round the fleece as tight as possible; in this way the inside of the fleece will be turned out; and this is very important, for if it is folded so that the inside of the fleece comes together, the wool will become so matted and stuck together that the wool assorters cannot open the fleeces without tearing them to pieces. In no case ought the fleeces to be tied with hemp or twine of any kind.

The above is the manner in which Benjamin Wells, and Co. who are large sheep growers and wool purchasers, direct wool for their factory to be put up.—*Pitts. Mercury.*

EXTRACTS FROM EDITOR'S CORRESPONDENCE.

Extract of a letter to the Editor, dated St. Michaels, Md. 19th inst. 1822.

"Harvest has commenced. The crop will be light; one of my neighbors is now cutting a field of sixty bushels seeding, which will probably yield fifteen for one. This is too rank to be cradled. The same field, six years ago, produced about eighteen for one.

The land on which this wheat grew, having been worn out by tenants, who worked it in two shifts for more than fifty years, sold thirty years ago for fifty shillings per acre. The present proprietor took possession of it in 1808, previous to which time no effort whatever was made to improve it. This wonderful change was effected, not only on this field, but the whole farm, by application of bank shells and sea-ware; effected too, without capital and a very slender force. Another of my neighbors has made a more recent and rapid improvement, than that above mentioned of a farm lately bought, by similar means, which he has in abundance, with capital to enable him to apply them.

Instances of this kind ought to be made known by means of inspecting committees, who should ride round and ascertain the facts on the spot. Their reports to the agricultural society might be productive of much good.

About thirty years ago a tenant, near this place, hauled a few loads of sea-ware on his land; but his landlord threatened to turn him off if he ever drew up another load, declaring that it would *ruin the land.*"

Extract of a letter to the Editor, dated Head of Chester, Md. 23d May 1822.

"I have just finished breaking a crop of flax made last year— an it be offered for premium in October? I shall furnish you with an article on flax breaking shortly, and will describe a simple implement for the purpose, which any man who can cut a mortice and tenon, can make in one hour. I think it a matter of great importance to those who have flax to clean. It is almost incredible, but it is a fact, that I have had 156lbs. flax broke in an hour and fifty seven minutes, by a man of middle size, with a wooden implement weighing 8¾lbs. As soon as I get those two hours work switched, you shall hear from me."

Herald Office,
Norfolk 24th June, 1822.

J. S. Skinner, Esq.

Dear Sir:—At the request of Mr. Walker Herron, I send you a little box containing a sample of "mammoth" *Gooseberries.* I am not sufficiently conversant in matters of this kind, and can only say that they are by far the largest I have ever seen. Mr. H. wishes to know from you if they can be propagated from the seed.—He desires me to inform you that he will bear in mind to send your strawberry vines at the proper time. Mr. H. is one of our most respectable and opulent citizens, and certainly deserves well of the community for the emulation he has excited among our horticulturists by his improvements in that useful science.

In haste,

THO. G. BROUGHTON.

P. S. The box will be handed you by captain Ferguson.

☞ NOTE BY THE EDITOR. The gooseberries were the finest we ever saw, one of them measured three inches in circumference; gooseberries and currants, of both of which there are great varieties may be expeditiously propagated by cuttings, suckers, and layers; but as every cutting and slip will most readily grow, that mode of propagating them is most commonly adopted.—They may also be propagated by *seed* to obtain new varieties, particularly gooseberries.

BLACK CURRANT.—A new species of black currant has been cultivated in Cambridgeshire, the fruit of which is so large, that in some instances a single berry weighs 61 grains, and measures in circumference two inches and a half.

London Magazine.

Extract of a letter to the Editor dated PALMYRA, *17th June*, 1822.

"The cut worm has been unusually destructive among the corn on the low grounds of Roanoke, this spring; also among the cotton. They have but very lately disappeared, and I presume are now changing their state and flying away. The rust is making terrible havoc in our wheat crops."

Extract of a letter to the Editor dated STATESBURG, *S. C. 3d June.*

"The second crop of the *Grano Mazola*, which you had the politeness to send me, is now ripening, and if you would like to see it, I can bring you a sample of both wheat and straw, and will wear a hat of the latter to Baltimore with me, (which will be about 1st of August next,) if I can get it manufactured, no matter how coarsely."

Extract of a letter to the Editor dated CHARLOTTSVILLE, *10th June*, 1822.

"I thank you for the samples of tobacco you sent me from your market. I have seen exactly such tobacco occasionally in my own crop, now and then a leaf, but we throw it away, because it will not pass our inspections; and our tobacco laws prohibit any to be shipped or carried out of the state by water, unless accompanied by the inspector's manifest. We must get this thing altered, and see if we cannot make as good *Maryland Yellow* as you do, for $35 is a tempting price."

* * *

FOR THE AMERICAN FARMER.

Fauquier County, *10th June*, 1822.

THE PLOUGH.

MR. SKINNER,

Being desirous of promoting the interest of agriculture, we the undersigned, assembled on the farm of Mr. George Fitzhugh, the 10th June with an intention of viewing the operation of various ploughs, and of ascertaining by actual experiment the power of propelling these ploughs, have thought proper to send you this communication containing the result of our experiments.

As the construction of farming implements and particularly that of the plough, is of great importance, to the agricultural class of the community, and tends much to the advancement of farming, we flatter ourselves that you will favour us with an insertion of this in your valuable paper.

We have correctly ascertained the power of propelling ploughs by a new invention of Mr. Stephen McCormick, of Fauquier county, called the angular balance, the construction of which is very simple, and with this invention the power of propelling ploughs may be ascertained, with minute accuracy.

The experiments were made with these ploughs, in various soils and completely to our satisfaction, and we are decidedly of opinion that the new improved patent plough made by Mr. Stephen McCormick, surpasses any implement of that kind, that has ever come under our notice, as to the simplicity of its construction, the facility with which it may be worked, and as to its durability we think we should be jusfified in declaring that it is inferior to no plough that we have ever seen in that respect; below you have a statement of the experiments made.

Your's respectfully,

JNO. G. KIRBY,
SAML. CATLETT,
HENRY FITZHUGH.

TRIAL OF PLOUGHS.

	Furrow sliced inches.	Square inches.	Power of index.	Inches per 100lb. power.	Pounds more than M'Cormick
No. 1, Stephen Mc Cormick's improved patent plough.	14 by 5	70	240	29.2	
No. 2, G. Davis's improved patent made by McCormick.	12 by 5	60	270	22.3	75
No. 3, Mc Kenzie's made by Stewart.	12 by 5	60	300	20	110
No. 4, G. Davis's Barshare, made by Stewart.	13 by 5	65	310	21	94

Auburn, Fauquier County Va. near Warrenton, *12th June*, 1822.

The above statement made by the several respectable agricultural gentlemen, will I am induced to belive, prove satisfactory to farmers; but perhaps it might not be considered improper for me to make a few explanatory remarks on the general utility of my improved plough and the advantages it possesses over similar implements.—Its excellence consists more particularly in the simplicity of its structure and from the experiments made by those gentlemen and manifestly to their satisfaction, it can be drawn with much less labour to the horse which is an important consideration with farmers.

This plough is not subject to be clogged with the soil, or any vegetable matter, and can be changed without any inconvenience or delay of time to suit different soils or the strength of teams. The mould board contracts or expands by turning the cross-piece near the heel of the plough which is made of iron, having a screw at each end, on the principle of the screw auger.—The share is welded to the bar and is confined at the bottom of the mould board near the point by a ketch which passes through the share and permanently confines it.

This plough requires only one brace which acts in the most powerful manner and is under the control of only one screw. The bar is protected by a piece of cast iron with two edges, and is riveted or screwed to the same: when one edge is worn out, turn the other over and it furnishes a new one, and when that edge becomes useless a new piece can be obtained for twenty five cents. My ploughs may be worked with or without coulters to suit the fancy of the purchaser.—But the mould board is so constructed as generally to do away the necessity of a coulter. I carry on the manufacturing of these ploughs at this place, where all orders will be cheerfully received and executed at the shortest notice. In justice to Mr. Davis's plough, I would remark, that it was not in as good order as the other ploughs, in consequence of the mould board's not being so smooth, and in that situation it would of course require more power to draw it.

STEPHEN M'CORMICK.

* * *

FROM THE STATESMAN.

FULLERS' EARTH.

The Woolen Manufactories of this country are suffering for fullers' earth of good quality.—Any person having a bed of it on his farm, may calculate on its being of more value than a mine of either iron or copper. The presence of a large portion of silecious earth is the prevailing character of this mineral.

It is classed by Thompson as belonging to the soap stone family, and it should be sought for in the neighbourhood of soap stone rocks, or in valleys contiguous to mountains in which silecious rocks abound. When dry it should be very soft and slippery like hard soap; and when thrown into water, it should fall into a fine mass resembling the appearance of curds. If this moist precipitate will wash grease out of woollens, and has no sensible grit, when rubbed between the fingers, it must approximate towards fullers' earth, and would be well worth a trial on a large scale.

Any person having clay answering the above description, by leaving a sample at the office of the Statesman, carriage paid, may have it examined by a good judge, and a report left at the office of its quality.

THE FARMER.

BALTIMORE, FRIDAY, JULY, 5, 1822.

The prices of the present week are much the same as our last report, but few parcels of grain brought to market, and these not much sought for. White wheat, $1 37 to $1 45—Red do. $1 30 to $1 37—White common, 75 to 78—Yellow do. 72 to 75—Rye, 68 to 70—Oats, 40 to 45.

MARYLAND TOBACCO.—The finer qualities, same as last report, and scarce:—Common do. more in demand, but no advance in price.

* * *

SWEDISH TURNIP.

☞ A few pounds of genuine *White Norfolk, Purple Top, and Swedish Turnip seed*, gathered the present season, can be had on application to Mr. Redding, at the Office of the American Farmer.

AGRICULTURE, &c.

JOSEPH P. CASEY,

No. 2 Hanover-st, has just received an additional supply of

BOOKS,

On Gardening, Agriculture, Botany, &c.

Sinclair's Code of Agriculture, 3d edition, plates
Dickson's Agriculture, 2 vols. 102 plates
Memoirs of the Philadelphia Society, 4 vols. A. E.
Farmer's Assistant, A. E.
Curtis on Grasses, E. E.
American Farmer, by J. S. Skinner
Clator on horned Cattle, plates, E. E.
Farmer's Magazine, 4 vols. plates E. E.
Kurwin on Manures, A. E.
Curwin's Agricultural Hints, plates, E. E.
Taplin's Farriery, A. E.
Davy's Agricultural Chemistry
Darwin's Zoonomia, plates
Do. Botanic Garden, do
Cox on Fruit Trees
M'Mahon on Gardening
Thatcher's American Orchardist
Practical Gardener, A. E.
American do do
Maw on Gardening
Abercromby on do. Cobbett on do. plates
Louden on Hot Houses
Marshall on Gardening
Nichols' Villa Gardener's Dictionary, calf and gilt
Maddock's Florist, calf and gilt, plates
Speechly on the Vine and Pine, plates
Thornton's Herbal, do. colored
Thatcher's Dispensatory
CASEY'S FLORA; Forsyth on Fruit Trees.
Philip's History of Cultivated Plants
Gardener's Hive and Calendar
Smith's Exotic Botany, 120 beautiful colored plates
Curtis' Lectures on Botany, 3 vols, 150 do do
Milne's Elements of Botany, colored plates
Linneas System of Vegetables, 2 vols plates
Burch's North American Flora, 2 vols do
Wildenow on the Physiology of Plants
Hull on the Elements of Botany, 2 vols
Waterhouse's Lectures on do
Keith on Physiological Botany, plates
Thornton's Grammar of Botany
Sumner's Systematic Botany
E. J. Smith's Introduction to do
Lee's do. do; Conversations on Botany, by a Lady
Botanical Dictionary, translated from the French
Do. Terminology; Gray's Natural Arrangement of British Plants
Sweet's Botanical Cultivator
Miller's Guide to Botany
Tuper on the Sensation of Plants
Eaton's Manual of Botany
Botanical Harmony
Mullenburgh's Genera of Plants; Compendium Flora Philadelphica,
Mullenburgh on Grasses
Locke on the outlines of Botany.

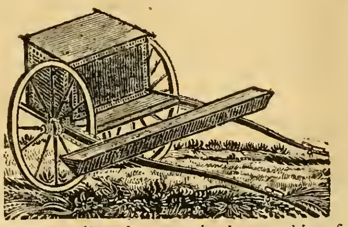
Agricultural Implements.

JOSEPH T. FORD, near Pratt-street Bridge, Manufactures, and has for sale,

A general assortment of Smith's improved patent ploughs, at from $7 to $20—Peacock's patent ploughs, at from $8 to 16$—Burdens' New York patent self sharpening plough, at from $10 to $20—Cary ploughs, at from $6 to $10—and the Connecticut plough, at from $5 to $9.—All of which are assorted in point of size, from the smallest to the very largest—and the prices according to size. A variety of superior Fluke Corn Cultivators—such as the contracting and expanding and Common Cultivator, and different kinds of harrows, such as the English hinge, Diamond, and the W harrow. Together with a full and complete assortment of wagons, drays, carts, wheel barrows, &c.—all of which are made by experienced workmen, of the best materials, and will be disposed of on as equally reasonable terms as they can be had in any establishment of the kind in the city.

Sinclair's Sowing Machine.

We think that this machine, which being founded on the principles of Bennet's Drill* has been coupled by Mr. Sinclair to a horse power, will be found particularly valuable on large estates, and to those persons whose other business may prevent their superintending the sowing of their crops; for the owner may in a few moments teach others to set this machine, so as to sow whatever quantity or kind he pleases, from the finest to the largest seeds or Plaster of Paris, and from two quarts to three bushels, of either, per acre.—*Edit. Am. Far.*



The subscriber has contrived a machine for sowing all kinds of grain, grass seeds and plaster of Paris by horse power, which driven by a man will sow much faster than could be done by hand, and with such great regularity and economy in the distribution, that whilst at every step it completely sows a breadth of twelve feet, it saves about one fourth of the seed or plaster usually bestowed. I have manufactured and sold some of these machines, during the two last years, so that they have been satisfactorily tried in Massachusetts, New York, Virginia, and by several individuals in Maryland, where the agricultural society convened near Baltimore, has recently examined one of the machines and awarded a premium in testimony of their approbation of its construction and design. And many intelligent and zealous agriculturists have, after trying this machine, written to me respecting it, in terms of approbation similar to those which are accorded by the respectable writers of the following remarks:

Extract from a letter received by me, from James M. Garnett, dated Fredericksburg, Virginia, April 1822.

"With your sowing machine, I am more pleased than with any new thing that I have ever tried. I have used it with oats, orchard grass, clover seed and plaster of Paris, each separately; and think myself authorised to state, that no mode of sowing either, which I have ever seen or heard of, is comparable to it, both for dispatch and regularity of distribution: It is manifest that it would sow wheat, rye and barley equally well."

Extract from a letter likewise received from Virgil Maxy, dated near Annapolis, Maryland Nov. 1821.

"I have made a fair experiment with your machine for sowing broadcast, and the result enables me to say with great sincerity, that I consider this machine a valuable addition to our agricultural implements. By means of it, a man with one horse will sow wheat about three times as fast as a man can by hand. The saving of labour therefore, is very considerable, but the uniformity and exactness with which it distributes the grain, an important point not completely attainable in sowing by hand, however careful the sower may be, constitutes its greatest recommendation.

"An intelligent servant will learn in an hour how to use it.

"I have made trial of the machine in sowing wheat only. It will however, unquestionably, be equally useful in sowing rye, oats, and plaster of Paris."

The price of the machine, as represented in the above cut, is $55, or without the carriage $35. The subscriber has constantly on hand a complete assortment of the most useful agricultural implements of his own manufacture, for sale at reasonable prices.

ROBERT SINCLAIR.

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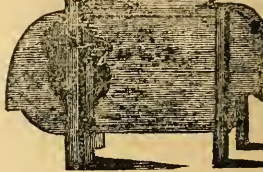
* *See American Farmer, Vol. 2, page 384.*

Agricultural Warehouse,

On Light and Ellicott Streets, near Pratt street wharf.

AT THE SIGN OF THE WHEAT FAN.



J. GRAFFLIN has for sale as above,
Wheat Fans from $23 to 35
* Premium Root cutters and Turnip slicers $16 to 20
* Do Machines for breaking unwretted Flax $18 to 50
† Patent Straw cutters of the most simple kind, with from 2 to 4 knives
Do Self-feeding Dutch and common do $5 to $18
Do Corn Shellers, do for horse power to grind corn and cobs together if necessary. } 13 to $60
Also Rolling Screens for Mills, and Flax seed do
Riddles, Safes, and Wire Sieves, assorted
Wove wire for windows and other purposes to order, and Smith's bellows, different sizes.

☞ Good workmen are employed, consequently the work will recommend itself.

☞ *Reasonable discount will be made on large orders.*

---

* *These machines were each awarded the premiums at the late Cattle Show.*

† *See the report of the committe on implements in this number.*

WANTED.

A sober, honest, industrious young man, with or without a small family, to take charge of a farm in Washington county, Md.

N. B. None need apply who cannot produce satisfactory recommendations as to capability and industry—apply by letter addressed, post paid, to J. R. D., Hagerstown, Washington county, Md.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, at the North West corner of Market and Belvidere-streets, Baltimore, *where every description of Book and Job printing is executed with neatness and despatch*—Orders from a distance for Binding, with proper directions, promptly attended to.

HORTICULTURE.

POMARIUM BRITANNICUM,

An Historical and Botanical account of Fruits, known in Great Britain, by Henry Philips.—Second Edition.

(Continued from page 106.)

APRICOT.—ARMENIACA:

Or Præcocia Mala.—In Botany, of the Class Icosandria Monogynia.

The apricot has long been considered, and in most botanical works stated, to be a native of Epirus; and the name of *pruneus Armeniaca* having been given to it in mistake, and which I shall shew belonged to another fruit, it has been transmitted down from one author to another, without particular inquiry. Theophrastus, one of the oldest authors, never mentions the apricot-tree as being cultivated in Greece, at the time when he lived: on the contrary, he alludes to it as an exotic, from an account transmitted to him: he also mentions the almond, as being the only tree in his country which produced the flowers before the leaves. *(Theoph. Hist. Plant. lib. vii. c. 12.)*

Columella is the oldest Roman author who has mentioned the tree that has been considered the apricot. He writes, that at the end of January we may graft the cherry-tree, the Armenian plum, the nectarine, the almond, the peach-tree, and others which plush early.

Pliny also mentions the Armenian plum; and says there is a plum, a kind of apricot, brought from a foreign nation, and which is called *Armeniaca*, and is desirable for its smell. This great naturalist has particularly mentioned the apricot, as distinct from the Armenian plum: he states that it was not known above thirty years before he wrote the account, which would make its introduction into Italy about the sixtieth year of the Christian era. Pliny says, "at its first coming, each sold for a Roman denier:" he adds, "this fruit is harmless, and is in such request among invalids, that thirty sesterces are given for one of them, which is as great a price as is given for any fruit whatever." "We have," continues he, "two sorts, *supernatia.* which we have from the high countries, and, namely, the Sabines; and *popularia*, which grow common every where." Thus Pliny has furnished us with an account of the apricot, and omitted to mention from whence it was first procured.

M. L. Legnier has made some remarks on this subject, which appeared in the French Encyclopédie, for November, 1815. Here he says, "I was struck with its mode of growth in Egypt, where it was anciently brought from latitudes still more southern. In Egypt its leaves have scarcely fallen off before the blossoms appear again. The name of *berikokka*, first given to it even in Greece, approaches very near to its Arabian name of *berkach*, or *berikach*." M. L. Legneir adds, "that the inhabitants of the Deserts called Oasis, gather and dry large quantities of apricots, which they bring down to Egypt for sale; and they are there called *michmich*." "The result of every inquiry I made," says this author, "was, that the apricot-tree grows there spontaneously, almost without cultivation: and as it is not known to grow in the natural state in any part of Armenia, we may very justly conclude that it is an Arabian fruit."

The apricot-tree was first brought to England from Italy, in the year 1524, by Woolf, gardener of Henry the Eighth, who it appears introduced several valuable fruits about the same period. *(Gough's British Topography, vol. i. page 133.)*

We have now considerable varieties of this agreeable fruit, many of which, by their names, inform us from whence they were procured, as the Algier, the Roman, the Turkey, the Brede, and the Brussels apricot, besides the Muscadine, the Orange and several new varieties. It is one of our earliest wall-fruits, as well as one in the highest estimation.

The young fruit which is gathered to thin the crop, makes an excellent tart; and, when ripe, it is second to no fruit for preserves or jam.

The apricot-tree produces its blossom buds not only on the last year's wood, but also on the curzons, or spurs, from the two years' old wood, great care should be used, in pruning, not to injure them; and it is advisable to remove all foreright shoots in the growing time.

The Brussels apricot is the best as a standard tree: they are all propagated, by grafting them on plum stocks.

Madame de Genlis relates the following anecdote, which cannot be translated so as to retain the wit, which depends on the agreement of the French name for apricot-tree with the inscription alluded to.

Après la mort de Louis XIze, au commencement de régence de Madame de Beaujeu, plusieurs personnes furent disgraciées; entre autres, Cotier, premier medecin du feu roi, qui s'applaudissant d'être échappé de cette cour orageuse, fit sculpter sur la porte de sa maison un abricotier avec cette inscription:

A l'abri, Cotier.

ALMOND.—AMYGDALUS.

The Name of a Genus of Trees, of the Icosandria Monogynia Class.

That the almond-tree is a native of Syria and Arabia, we have the authority of the earliest writers.

Jacob mentions almonds among the best fruits of the land of Canaan, when he says to his sons, "Take of the best fruits in the land in your vessels, and carry down the man a present, a little balm, and a little honey, spices and myrrh, nuts and almonds." By the miracle of Aaron's rod, we learn that this tree was growing in the wilderness—"the rod of Aaron for the house of Levi was budded, and brought forth buds, and blossomed blossoms, and yielded almonds." The Israelites did not use the same ornamental statuary that adorned the heathen temples, but copied the fruits and flowers of their country, where they admitted embellishment. The almond was selected to beautify the candlesticks for the tabernacle, which were made of pure gold, of beaten work: "Three bowls made after the fashion of almonds in one branch, a knop and a flower: and three bowls made like almonds in another branch, a knop and a flower; so throughout the six branches going out of the candlestick. And in the six candlesticks were four bowls made like almonds, his knops, and his flowers."

Theophrastus, who wrote about 300 years before Christ, mentions the almond as the only tree in Greece that produced the blossoms before the leaves. Servius relates the traditionary tale of Phyllis's being changed by the gods into an almond-tree, which was called *phylla* by the Greeks. Some days after this metamorphosis, Demophoon her lover revisited Thrace, of which Phyllis was queen: and when he heard of the fate of Phyllys, he run and clasped the tree, which, though at that time stripped of its leaves, suddenly shot forth and blossomed, as if still sensible of his tenderness and love.

The almond tree was not cultivated in Italy in the time of Cato, who calls the fruit, *nuces Græcæ*, or Greek nuts.

The Jordan Almond-tree was first planted in England, in the reign of Henry the Eighth, 1548 *(Hortus Kewensis.)* Lord Bacon, whose Natural History was written some years after this time, mentions it among the trees that blossom earliest, and whose fruit ripens latest: and which he accounts for as being a tree that hath much oily moisture. He recommends almond butter as an excellent nourisher to those that are weak; as also the oil of almonds, newly drawn, with sugar and a little spice, spread upon toasted bread, as a nourishing diet.

The Jordan almonds are the most esteemed for the table, and are named after the river Jordan, so celebrated in the Old Testament, and from whence they were first procured: these almonds, when taken in moderation, are wholesome, being cooling, healing, emolient, and nutritive: they are much prescribed in emulsions, and are found of good effect in all disorders from choleric and acrimonious humours.

The oil of almonds is principally drawn from the Valentian and Barbary almonds, and is well known for its medicinal qualities.

Bitter almonds were considered by the ancients as of use to take off drunkenness. Plutarch relates that Drusus's physician, who was a great drinker, took at every cup five bitter almonds, to allay the heat and fumes of the wine. The bitter almonds are held aperient, detersive, and diuretic; they are therefore recommended in obstructions of the liver, spleen, &c. Pliny states, that a decoction of the roots of the bitter almond-tree supples the skin, prevents wrinkles, and gives a fresh, cheerful colour to the countenance; and that bitter almonds cause sleep, and create appetite. They were considered a cure for chilblains, as well as the bite of a mad dog.

Neumann states, that these almonds are poisonous to birds, and all animals that come into the world blind. The Bohemians are said to bruise them, and to throw them where fowls frequent, which will stupify those that eat them, so that they are easily taken by the hand. The bitter almonds are more generally used for culinary purposes, and for flavouring cordials, &c.

As an ornamental tree, the almond deserves to be more generally cultivated in our shrubberries, and particularly as a foreground to clumps of evergreens in parks and plantations, which have a sombre appearance towards the spring, that would be much relieved by the beautiful pink flowers of the almond-tree, that give a gaiety to the plantations in March and April, a season when no other trees are in blossom. In favourable seasons, the fruit often comes to good perfection in this country; but these almonds will not keep so well as those produced in warmer climates.

(To be Continued.)

FROM POULSON'S AMERICAN DAILY ADVERTISER.

Agricultural Exibition.

The First Philadelphia County Agricultural Exhibition was held on the 4th. and 5th. of June, within a mile of of the Schuylkill Permanent Bridge.

Although the novelty of the scene, and nearness of the town, opposed great difficulties to the execution of the plan which had been adopted, the objects of the institution were, in most points, attained. So large a collection of respectable farmers has seldom been witnessed, except on great national occasions. The presence of many distinguished persons, from distant states, decididly evinced the interest which is felt in most parts of our country for this mode of advancing the cause of Agriculture—by the Exhibition of the results of successful labour, rather than merely by the plausible disquisitions of fanciful theorists. The means of contrast which are afforded—the emulation which is excited, tend in a high degree, to stimulate the industrious husbandman, whilst the assistance which is given through the vanity of those who attempt to lead, and, by their purses, are brought to aid, an object in which all are alike interested, cannot fail, under proper provisions, to produce great and permanent good. The committees who have distributed the Prizes for Stock, were constrained to decide with reference only to the objects before them, without regard to the persons by whom they were shown—thus, if in some instances a large number of premiums have fallen to the share of a few, to the exclusion of those whom they had wished to reward, they are defended by the rule, which, *without variation*, *has ever* been prescribed. They have considered it proper to notice, at length, the breeds of most of the animals, which were shown, as we have long been possessed of some families of imported neat Cattle, which, with care, might be brought to almost approach the excellence of the originals from which they are derived.

To the Hon. WILLIAM TILGHMAN,
Chairman of the Stock Committee.

The committee to whom was referred the award of Prizes for neat Cattle, have the honor to report.—That the limits by which they were necessarily controlled, have excluded from Premiums many animals exhibiting the essential points, and some of the most valuable properties of their race—among them they take the liberty to record, in the order of their excellence, those which they consider most worthy of remark:

Mr. Benjamin Serrill's stock from Delaware County comprising four Kentucky Cows, their Calves, and five Steers, attracted much notice by their size, fine forms, and established properties for the Shambles—one of the cows and two of the Calves were marked by strong points of deep milkers.

Mr. Charles Justis' Kentucky Cow, with her twin Calves, from Chester, showed the decided points, square frame and good properties, inherent in her family.

Mr. John Justis' Kentucky Cow and her Bull Calf, were scarcely less remarkable than the last, for the form and tendency to become fat, which the committee have been led to so highly approve.

Mr. Nicholas Biddle's Heifer, and a Bull Calf, both by the imported thorough bred improved Durham short horn Bull Denton, could not pass unnoticed—their heads, horns, loins, and backs bore evident marks of the stock from which they are derived. The Bull, although not so fine in shape, as some of his family, has great claims through his Dam, the celebrated Southborough Cow, which produced within one year 480½ lbs. of butter!

The Pennsylvania Hospital Stock, of five Cows, and an heifer of two years, exhibited at once the best specimens of our native milch cattle, and a mixed breed of Holstein blood, whose well known excellence leaves scarce room for comment—some of them evidently had the irregular shape of an Alderney Cross, whilst the large black Cow retained the good form, large frame, straight bone, and capacious udder, of Holstein origin, with many other characteristics of a deep milker.

Mr. Tomlinson's collection of twenty-five Cows and Yearlings, bred by himself from a Bull of Holstein blood, had the shape and general character of fine Dairy Cattle. The Committee cannot avoid adverting to this decided proof that milch stock may be raised *with profit* by a skilful breeder, upon valuable lands, in the vicinity even of our largest towns.

Mr. Charles Penrose's Cow of Holstein blood, and a Bull calf by the Teeswater Bull George, were generally admired for their good shape.—The Calf had attained extraordinary size, and showed some of the finest points of his family.

Mr. Clapier's beautiful black short horn Cow of Holstein blood, and four Yearlings of native and mixed breeds, were marked by most of the best points of the useful and well formed Cow, imported by Mr. Sims from Germany and Mr. Waln from Flanders.

Mr. Abel's Heifer has the well known character of Holstein Milch Stock, mixed with a coarser family of native Cows, and by her good shape and size merits notice.

Mr. Logan's two Cows of Holstein, and Dutch breeds were distinguished among many of the same family, by the smallness of their bone, and appearance as good milkers.

Mr. Pascall's Cow and Calf, derived from Holstein blood, and Mr. Bone's stock of native Cattle, obtained the attention of the committee by her known properties as a milker.

Mr. Lloyd's black and white Cow, with evident characteristics of Mr. Waln's importation, was a good specimen of a cross of Holstein and native Cattle.

Mr. Haines' imported French Cow, exhibited, in an extraordinary degree, the beautiful symmetry of Brittany Cattle, contrasted with the irregular shape and light carcases of his pure Alderney stock.

Mr. Gavin Hamilton's imported Brittanny Cow, possessed many of the beautiful points of her family.

Mr. Jacoby's large Cow and Heifer, derived from a mixed breed of Holstein and native stock, excited from most of those who saw them, much attention.

Mr. H. Boreaff of Philadelphia, sent to the exhibition an Heifer with singularly fine form, and unusual size, accompanied by many of the points of Cattle best adapted for grazing purposes.—The committee regret, that this fine animal was excluded from Premium by the regulations under which they were constrained to act.

Mr. Hoope's red Cow and Calf did not pass without remark.

Mr. Knox's very pretty Pole Cow and Heifer, were noticed as a variety of the Hornless Breed.

Mr. Hunt of Delaware County, sent two Oxen and a fine three year old Steer, which evinced, in a great degree, the good shape of the Kentucky Stock of Cattle from which he is derived.

Mr. John Diehl's Ox from Delaware County, was a good specimen of the Cattle bred in the western parts of New York, which experience has proved to be well fitted for both the yoke and shambles.

Mr. Hickman of Chester County sent to the exhibition a yoke of oxen remarkable for their good shape, size and appearance of vigour, but as they had not been broken *to the plough* they could not become competitors for the Premium.

Mr. Anderson's Steer of 4 years had attained great height, but as he had neither the breadth, roundness of carcase nor smallness of bone which experience has proved to invariably accompany the best breed of animals for the shambles, the Committee are obliged unwillingly to place him at the end of the list.

After the most patient examination of all the animals subjected to their view, your committee do award,

The 1st. Premium for Bulls, not more than 4, nor less than 2 years old, - $50

To John Hare Powel for Rob Roy (of three years) from Brindle, by the imported thorough bred "improved Durham short horn" Bull Denton—Brindle was from Mr. Williams's Native Cow, by Mr. Lee's imported Bull.

The 1st. Premium for Bull Calves, not more than 12, nor less than 6 months old, - - - - 30

To John Hare Powel for Tom Jones, from Cherry by George, both derived from Teeswater Stock, imported by Mr. Heaton.

The 2d. Premium, - - 15

To John Hare Powel for Oakes, from Mr. Quincy's Oakes Cow, (which produced 484¼ lbs. of butter in one year,) by the imported thorough bred improved Durham short horn Bull Cœlebs.

The 3d. Premium, - - 10

To John Hare Powel, for Baron from the Queen by George.

The 1st. Premium for Cows, not more than 7, nor less than 3 years old, - 50

To John Hare Powel for Flora, an imported thorough bred improved Durham short horn Cow, of 4 years, descended from Comet.

The 2d. Premium, - - 20

To John Hare Powel for Rose, an imported thorough bred improved Durham short horn Cow, of 6 years, descended from Comet.

The 3d. Premium, - - 10

To John Hare Powel, for Steam Boat—pedigree not known.

The 1st. Premium for Heifers not more than 3, nor less than 1 year old, - 20

To John Hare Powel, for Clarissa, from Stone's Cow, by Denton.

The premium for the best Heifer, not more than 3 years old, which shall have calved twice, reference being had to her offspring. - - - 40

To John Hare Powel, for Prize, from Bughorn, by Denton.

The 1st. Premium for Heifers, not more than 12, nor less than 6 months old, - 20

To John Hare Powel, for Lucinda, by Denton, from Star, begotten by the same.

The Premium for the best Heifer, of Teeswater or Durham blood, not more than 3, nor less than 1 year old, - 20

To John Hare Powel, for Fairy, from Prize, by Denton.

The Premium for the best Heifer of Devon blood, not more than 3, nor less than 1 year old, - - - 20

To John Hare Powel, for Julia, of 18 months, by Denton, from the imported Cow Devon.

In addition to the above stock, John Hare Powel exhibited two imported heifers, six cows, (three of Teeswater blood) and two bull calves, by Denton, as well as the thorough bred improved Durham short horn bull calf, Lothario, of 5 months, begotten in England, by George, who was by Phenomenon—he was by Favourite, Favourite was by Old Favourite, which begat Comet, from whom Rose, the dam of Lothario, is descended. In the opinion of the Committee, this bull calf decidedly excelled, in all his points, every animal of his age which they have ever seen, but being not 6 months old he was excluded from premium.

All the above premiums awarded to John Hare Powel, have been relinquished by him for the benefit of the Society.

The 2d. Premium for Bulls, not more than 4, nor less than 2 years old, - $20

To Mr. Manuel Eyre, for Leopard, derived from Teeswater stock, imported by Mr. Heaton.

In addition to this bull, Mr. Eyre presented a very large yearling bull, and a bull calf, both of great promise, four very fine cows, two of which were marked by clean heads, necks, and heavy hind quarters, also four heifers partaking of the strong Teeswater points of his other stock.

The 4th. Premium for Bull Calves, not more than 12, nor less than 6 months old, - - - $5

To Mr. Rose, of Delaware county, for Major, from his white Cow, by Mr. Powel's Bull George, derived from Teeswater Stock, imported by Mr. Heaton.

Mr. Rose exhibited the Dam of Major with four of her offspring, all of which showed many of the milking points of the Cow.

The 2d. Premium for Heifers, not more than 3 nor less than 1 year old, - $10

To Mr. Aaron Clement, for Lucy, by Mr. Powel's Bull George, from a Cow of the same blood.

The 3d. Premium for Heifers, not more than 12, nor less than 6 months old, - 5

To Mr. Aaron Clement, for Laura, from a Kentucky Cow, by Mr. Powel's Bull George.

The 4th. Premium, - - 3

To Mr. Aaron Clement, for Kate, from Lucy, by Mr. Powel's Bull George.

Mr. Clement showed, in addition, three fine steers of Teeswater and Kentucky blood, two yearling bulls, one remarkable 5 years old Teeswater bull derived from Mr. Heaton's stock, and six cows, very strongly marked with Teeswater points; one of them particularly attracted the notice of the Committee as showing the blood of Mr. Ketland's importation of short horn Cattle of Collings' breed.

The 3d. Premium for Heifers, not more than 3 nor less than 1 year old, - $5

To Mr. Thomas Serrill, for Red Beauty, by Mr. Justis's Kentucky Bull, from a very fine Cow derived from Mr. Ketland's importation.

The 4th. Premium for Heifers, not more than 3 nor less than 1 year old, - 3

To Mr. Henry Serrill, for White Daisy, from a fine Holstein Cow, by a Bull of the same breed.

Mr. Henry Serrill exhibited two steers of two years, one of them showed decided points of Mr. Patterson's importation, the other, the good shape and beautiful points which generally mark the progeny of Mr. Ketland's Cow.

The 2d. Premium for Heifers, not more than 12 nor less than 6 months old, - $10

To Mr. Samuel Cox, for a white Heifer of 7 months, of Holstein blood.

Mr. Cox sent to the exhibition a very fine Cow, and well a shaped large Bull, good specimens of Holstein Cattle.

The Premium for the best Ox, not more than 8, nor less than 5 years old, - $15

To Mr. Smith of Delaware County, for Lofty of 5 years.

Mr. Smith also exhibited two cows, a heifer, and a remarkable ox, which caused the Committee to hesitate in awarding the prize to Lofty. The cows were evidently of the Kentucky breed, and showed, particularly about their heads, horns, and hind quarters, much of the character of the short horn family, of which several animals had been carried to the country in which they were bred.

The Premium for the best Steer, not more than 5, nor less than 1 year old, $10

To Mr. Lowry, for his brindle and white Steer of 3 years, raised by himself.

(Signed) THOMAS SMITH,
GEORGE SHEAFF,
CHARLES LLOYD.
JOHN BARNEY,
THOMAS SERRILL, } Assistant Judges.

To the Hon. WILLIAM TILGHMAN,
Chairman of the Stock Committee.

The Committee appointed to distribute the Premiums for Sheep, Horses and Swine, award,

SHEEP.

The 1st. Premium for Ewes, not more than 4, nor less than one year old, $10

To Francis Hickman, of Chester County, for his Ewe of Irish and Dishley Blood.

The 2d. Premium 5

To John Barney of Delaware.

The 1st. Premium for Ram Lambs, 5

To John Barney, for his Ram of Dishley Blood.

The 1st. Premium for Ewe Lambs, 4

To Aaron Clement, for his Lamb, 3 months old, of Dishley Blood.

The Premium for the best Ram of Dishley Blood, not more than 4, nor less than 1 year old, 20

To John Barney,

The Premium for the best Ewe of Dishley Blood, not more than 4, nor less than 1 year old, 10

To Aaron Clement.

The Premium for the best Merino Ram, not more than 4, nor less than 1 year old, 10

To Thomas Serrill, of Delaware County, for Alexander of 15 months.

The Premium for the best Merino Ewe, not more than 4, nor less than 1 year old, 7

To Thomas Serrill, for Roxana, of 15 months.

In addition to those which received Premiums, Mr. Clement exhibited forty Sheep, remarkable for their Dishley points and good shape, derived from Captain Been's importation.

Mr. Barney also exhibited eight Sheep, taken from his extensive flock distinguished by the characteristics and shape of the fine race of animals imported by Mr. Beens. The Committee cannot too highly extol the successful efforts of these spirited breeders, in distributing throughout our Country a family of animals so remarkable for early maturity, great size, tendency to become fat, as well as length of staple and weight of fleece.

Mr. John Pascall's Sheep of Dishley Blood, had great size, and strong points, which deserve much notice.

Mr. Nicholas Biddle sent eight fine Sheep of Dishley Blood, marked by the forms, points and fleeces, which have long distinguished the flock from which they were derived.

Mr. Powel exhibited twenty-one broad tail Sheep, of Tunisian Blood, which retain a large portion of the excellence of the Tunisian Sheep first brought into Pennsylvania through the liberality of Colonel Pickering.

Mr. Busti's imported German Sheep, possessed many good points, with fleeces of long staple.

Mr. Grier presented two very fine broad tail Lambs, of remarkable size, with good proportions.

Mr. John Clement, of Delaware County, exhibited a fine Ram of Tunisian Blood.

Two Wethers were exhibited by the Directors, which Mr. Charles Kuhn had taken from his flock of 300 pure Merinos, bred by himself, to prove that good shape and great size, may be found among a family of animals, which have been generally valued but for the fleece. The flavour and fatness of the mutton, equalled, upon trial, the reputation which Mr. Kuhn's flock has long maintained.

The Committee were much disappointed in finding so few Merinoes at the Exhibition, but they are satisfied that a large collection from the numerous flocks in the neighbourhood would have been assembled, had not the heat of the weather prevented their coming.

HORSES.

The premium for the best Stallion, fitted for the road or draught, not more than 12, nor less than 3 years old, $50

To Aaron Clement, for young Oscar.

The Premium for the best brood Mare not more than 7, nor less than 4 years old, 50

To John Hunt, for Sibilla,

The Committee deem it proper to state, that of the eleven Stud Horses presented for Premium, *there was not one* in their opinion distinguished by the properties or shape fitted for the purposes of a farm, but as Mr. Clement's Horse, Young Oscar, appeared to the *majority* of them to be better adapted for the "road or draught" than the others which were shown, they were *compelled* to allow him to take the Premium.

The Committee regret that they are not enabled to notice at length, all the Horses exhibited, as the regulation was not observed, which required them to be brought to the ground before nine o'clock.

SWINE.

The Premium for the best Pigs, not less than 5 in number, and not more than 9, nor less than 3 months old, - - - - - - $5

To Isaac Roberts, of Montgomery county.

MANUEL EYRE,
BENJAMIN SERRILL,
LEWIS CLAPIER.
JOHN TOMLINSON, *Assistant Judge.*

To the Hon. WILLIAM TILGHMAN,
Chairman of the Stock Committee,

The Committee appointed to superintend the performance of Oxen, in the plough, report—That George Sheaff's oxen, with a ploughman and a driver, ploughed one eighth of an acre of stiff sward land, an average depth of 7 inches, in 24 minutes, that John Hare Powell's oxen, with a ploughman but without a driver, ploughed the same quantity of the same land, an average depth of 6 inches, in 25 minutes; that William Flower's oxen, with a ploughman, as well as a driver, ploughed the same quantity of land an average depth of 6 inches in 27½ minutes.

The Committee has had much difficulty in deciding between the merits of Mr. Sheaff's and Mr. Powell's oxen, but in consideration of the latter having ploughed with a ploughman alone, they do award to John Hare Powell, the premium of $50.

THOMAS SMITH,
CHARLES LLOYD,
ALLEN THOMAS, Jr.
REUBEN HAINES,
HENRY SERRILL.
AARON CLEMENT,

To the Hon. WILLIAM TILGHMAN,
Chairman of the Stock Committee.

The Committee appointed to make trial of the Ploughs exhibited for premium, Report, that seven ploughs were offered, one by Mr. Stevens, of Hoboken, one by Marshal & Smith, of New Jersey, one by Gideon Davis, of Georgetown, D. C. one by William Suplee, of Darby, one by David Dickenson, one by Mr. Wright, of New Jersey, and one by Joseph White, of Downingtown, made wholly of iron. After having carefully examined the construction, and accurately tested the performance of them by means of the dynanometer, they are decidedly of opinion, that Mr. Steven's Plough deserves the Medal, inasmuch as it requires less force to draw it, and is better adapted for the general purposes of our farms than any other plough they have seen.

For a premium of five dollars they recommend Mr. Suplee's plough, as it is well fitted for turning sward land.

Although the other ploughs have much merit, yet as it does not come within the scope of the duties of your Committee, they do not enter into a detail of their performances.

The Committee were very much struck by the cheapness, strength and extraordinary performance of Gideon Davis's improved Shovel Plough, and although they had not an opportunity of testing it properly, they are led to believe that it will be a valuable acquisition in the cultivation of drilled crops.

Mr. Joseph Kersey, of Downingtown, exhibited an ingenious contrivance for cleaning ploughs, which, in the opinion of the Committee, is well calculated to effect the object for which it is intended.

Mr. Williams's Horse Hoe appears to be admirably adapted for tilling drilled crops.

A Turnip Drill Harrow, two cultivators, and an Ox Cart somewhat improved, were sent to the ground by John Hare Powell.

Chapman & Rawley's Machine for breaking Flax without wretting was again subjected to the severe trial of practical men, the opinions of whom, perfectly coincided with those of a Committee which had on a former occasion, awarded to it the premium of two hundred dollars.—Your Committee therefore do not hesitate to declare, that it is likely to become one of the most important machines which can be brought to aid the husbandry of Pennsylvania.

Mr. Baily's Mowing Machine satisfied the Committee, not merely by its performance during the slight trial which they were enabled to give it, but by the general impression which it has made throughout one of the finest Counties of our State, that it is well fitted for mowing lands which are not uneven, therefore, they recommend it for a discretionary premium of Fifteen Dollars.

Mr. Eastman's Chaff Cutter could not fail to obtain their approbation, by its rapid and effective movement, in cutting not only straw, but even sticks an inch in diameter, without injury to its knives; the facility with which it is made to cut straw of different lengths, adds much to its usefulness; the Committee therefore, recommend it for a premium of ten dollars.

Mr. Barnard's Chaff Cutter deserves the notice of the Committee (although it is not an original invention,) for the facility with which it is made to operate; its simplicity and cheapness are great recommendations, and as it has had the test of experience, your committee are disposed to prefer it to most implements of the sort which they have seen.

Mr. Moses Pennock of Chester County, presented a new modification of a revolving Horse Rake, which the Committee have not had an opportunity of testing by experiment, but as the general impression of those who saw it was much in its favour, they are led to believe, that it is an improvement worthy of imitation.

Among the various imported implements which were shown, your Committee were not enabled to discover any thing likely to become useful in our modes of husbandry.

THOMAS SMITH,
CHARLES LLOYD.
REUBEN HAINES.
AARON CLEMENT.
JOHN TOMLINSON.
HENRY SERRILL.
Published by order of the Directors,
JOHN HARE POWELL.
STEPHEN DUNCAN.

TO THE EDITOR OF THE AMERICAN FARMER.

Fredericksburg, (Va.)
June 19th, 1822.

Sir,

I have for some time intended to inclose to you the within extract (from the European Magazine of 1800) for publication. Many of our best farmers in the state, have had a view of it, and are desirous that publicity should be given to it through the medium of your excellent Journal. If your impression should be, that any advantage will result to the farming portion of the community from it, you will be so obliging as to give it insertion.

These experiments though made in a foreign country, and in a climate and soil very different from our own, are I think calculated to benefit us on this side of the Atlantic, regard being had to the great humidity of the one, and often extreme dryness and heat of the other atmosphere. It is I presume, pretty well known at this day among our farmers, that in applications of British Husbandry to our meridian, great allowance is to be made, as to the regularity of her seasons, and the extreme irregularity of ours. Her winters are longer and much more temperate than we generally have them, and our summers considerably warmer and dryer. The frosts are seldom either so early or late, and of that severity, as to injure the crops of that country; while with us, scarcely an autumn, winter, or spring passes, but that great injury is done to the wheat crop, in consequence of the early and late influence of severe cold weather; this too, with an irregularity (alternately of heat and cold) that must always render the crops extremely precarious. The present season throughout the middle, Northern and Eastern sections of the Union, is an awful admonition to us of this fact; for, I have scarcely seen or heard of a good crop, either in this, or any of those states. The fly, severe winter, and chinch bug, have ranged in every direction with almost indiscriminate destruction—and what is very much to be lamented indeed, a false economy has crept in among the farmers generally, of an extreme moderate use of plaster, and clover seed. This circumstance, added to the general disposition they have of blending the grazing system to an excess, with the extensive culture of wheat, contribute to deteriorate the land, which renders the wheat less able to resist the various disasters to which it is so unfortunately liable.

In my opinion from an extensive view of the agriculture of our country generally, and a constant and regular research into farming operations and experiments of a very great many industrious, practical men, there certainly is no one circumstance so badly understood among them, as that of expending money and labour in the improvement of soil, with regularity, judgment, and constancy. They have only periodical visitations of improvement upon large and extensive scales, which they often indulge in most lavishly and injudiciously; when this subsides, which it is sure to do in two or three years: they then revert to a rigid making, and close saving system. Taking all they can possibly get from the soil, leaving and giving nothing to it. By this means agriculture is either abandoned by them, or they become so crippled in their fortunes by impoverished soil, and miserable crops, as to produce abdication, and consequent migration to some one of our new states or territories.

A farmer to be prosperous in our country, must lay down a system of improvement commensurate with the means he has of giving force and vigour to it. His plans and his habits ought never to exceed a most rigid regard of prudence; and in ordinary times at least, he should recollect that a failure of his crop in a small degree even, must be attended with great injury to him. For his family, overseer, negroes, farm and stocks, are to be supported; and his physicians, and blacksmith's bills, his taxes, levies, and a variety of contingent charges, are to be paid from it—and moreover, a charge though last mentioned, yet it is by no means small in amount and consideration of it, is the education of his children. A course of management then calculated to realise an object in the aggregate of so great importance, ought assuredly to engage the closest attention and study of every farmer, especially those who have to depend solely upon agriculture. I have often remarked, that with a resolution in the commencement to be independent, a farmer will be so; because, for a few years he indulges in neither luxury nor superfluity. He learns economy, and he gathers much useful knowledge. He is young, and may be industrious and prudent. His family is of course small. His wife naturally bends to his own views; and from thirty years experience, I have really found very few instances, where a wife has been disposed to war against the peace and happiness of her family. It is only requisite then in my opinion, for them to know the extent of their resources; and the most ordinary reflection will at once teach them to resist temptations to expense, which cannot be supported, and which, if indulged in, must so obviously prove ruinous. Thence it is, that I draw the deduction, that it is in every farmer's power to live within his means. Industry, prudence, resolution, and equanimity, will insure it to him—and a few years perseverence will assuredly improve his fortune; while a habit thus correct, and important to him, will never after escape him. His mind is thence perfectly relieved; and his course through life becomes clear and determinate.

With an apology for so great a digression from the subject of the proposed publication.

I remain, Sir, respectfully,
Your ob't serv't,
CARTER BEVERLEY.

Extract from the European Magazine for April 1800.

Observations made by Nathaniel Kent (his Britanic Majesty's Manager, or principal farmer on his farms in the green park at Windsor, called the Norfolk farm of 1000 acres, and the Flemish farm of 400 acres. The whole tract containing 4000 acres,) in a letter to the secretary of the Society for the encouragement of arts, manufactures and commerce.

"In nine years from the period of the farms being thrown into operation (viz. from 1791 to the year 1800,) he observes, that notwithstanding the great improvement of the soil, the two farms of 1600 acres aggregately carried more stock to market than the whole 4000 acre tract. The Norfolk farm borders on the extensive waste called bushot-heath; hitherto considered too barren for cultivation. He managed it under a five course shift, first wheat; second turnips; third barley, with seeds (viz. grass seeds,) which continue laid two years. The *seeds* however turned to very little out after the first year. The course was five shifts of 100 acres each. The first, was wheat or rye; second, the irregular shift; third, turnips; fourth barley or oats; fifth, clover.—Strong or cohesive soil answers best under a four course shift, first year wheat; second cabbage or clover; third oats; fourth beans. The irregular shift is partly productive and partly preparative: 40 acres of it were sown with vetches, to be fed off; 40 acres with rye, the latter end of August, for early seed the next spring for the ewes and lambs; the remaining 20 acres are planted with potatoes, and the whole came round for turnips the next year.

"Sheep running in the park, improved the *farm* very much; a great part of it when he commenced would produce nothing at all, recently it yielded a clear annual rent value (or with crops) of more than the original fee-simple value of the land, in a period of less or about 9 years.

"Oxen are considered greatly profitable and infinitely more valuable than horses for all the purposes of the farm. He consequently exploded the use of horses altogether. He worked not less than 180 head of oxen on the two farms, parks and gardens; upon the two farms 200 were kept, including those coming on, and those going off—40 are brought in every year, rising three years, and are kept as succession oxen in the park, 120 are under work, and 40 every year are fatted off, rising 7 years.

"The working oxen are mostly divided into teams of 6, and one of the number is every day rested; so that no ox works more than 5 days out of the seven. This additional day of rest to the animal is of great service indeed to him, for he is found to do better with ordinary keep and moderate labour, than he would do with high keep and harder labour. This is the great secret to learn respecting oxen; for an ox will not admit of being kept in condition like a horse, artificially by proportionate food to proportionate labor.

"These oxen are never allowed any corn (that is grain of any kind) as it would prevent their fatting so kindly afterwards. Their food in summer is only a few vetches, by way of a trial, and the run of warm meadows, or what are called leasows, being rough woody pastures. In winter, they have nothing but cut food, consisting of two thirds hay, and one third wheat straw, and the quantity they eat in 24 hours, is about two pounds of hay and twelve of straw, and on the days of rest, they range as they like, in the straw yard; they are never to be confined to hot stables, but must have open sheds, under which they eat their cut provender, and must be left to their choice to go in and out; under this management, 4 oxen will generally plough an acre a day, and do other work in proportion, their advantage then is no doubt very great over horses, and the result to the public highly beneficial.

"The oxen which are brought on in succession, run the first summer in the park, and in the leasows, and temporary straw yards in the winter. These temporary straw yards, are made in different places, so that the manure which they make, may be as near to the spot where it is wanted as possible.

"The 40 oxen that go off, are summered in the best pasture, and finished with turnips the ensuing winter. The usual way has been to draw the turnips, and to give them either stalled or in cribbs, placed in the yard, with plenty of straw to brouse and lie upon: but last winter an experiment was made which answered extremely well, and will be again repeated next winter. This was, penning the oxen by day upon the turnip land, in the manner that sheep are penned, with this only difference, that the turnips were thrown up into cribs, instead of being left to be trodden into the ground, and in the nights they were driven into a yard, with a temporary shed well littered with rushes, fern and leaves, and turnips and barley straw given to them in cribs. They thrived fast, and every one of them made at least eight loads of good muck in the night yard, besides the benefit done in treading and dunging on the land in the day time, which was very great, the soil being very light. The result of the ox system is, that charging the ox for his agistment the first year, for the value of the grass and turnips the last year, and putting what he has in three intermediate years as an equivalent for his labor, after every allowance for risk, each ox, will pay at least twenty per cent profit. In what instance does a horse produce so much?

"Oxen cannot be used to such great advantage on stony land—they are all worked at Windsor in collars, as their step is found to be much more free, than when coupled together with yokes; and they are found to do their work with much greater care in collars than in yokes, which ought every where to be exploded.

"You must adapt the oxen to the soil, upon light land, (N. F.) the Devonshire sort are used; upon strong heavy soil (F. F.) the Herefordshire; and in the park, where the turnips is carting and harrowing, and rolling, the Glemorganshire. They are all excellent in their different stations.

"Train oxen thus: first put round their necks a broad strap, and fasten one end of a cord to it, and the other end to a large log of wood, and let the ox draw it about as he feeds about the pasture, for three or four days, before he is put into harness, by which means he is very much brought forward in docility.

"Twenty per cent may be always very safely calculated to be the average profit of an ox, stating them to be bought in at £10, and allowing them to sell for £25, taking off £10, for the two years they are not worked; but last year, beans being of very little value, they were kept longer than usual, by being stall fed with bean meal, which answered very well, as they were brought to an average of nearly £30; and one of them a Glemorganshire ox, originally bought for £8, and from his compact round make, always called the little ox, thrived to such a surprising degree, that he became too fat to be able to travel to Smithfield, and was therefore sold to Mr. Charlwood, a neighboring butcher for, £47.

"Two ewe flocks of 400 each are kept; the soil being light and dry, admits of winter folding (except when the weather is wet,) upon the young clover. This is a practice much to be recommended, as it is productive of a great crop of clover, and prepares the land the ensuing autumn for a crop of wheat, without any further assistance. It is excellent to fold sheep upon light land, in dry weather, immediately upon the sowing of the wheat, which may be put forward or kept back, a fortnight or three weeks on that account. It is well to have a large fold, and to give the sheep a turn or two round it in a morning before they are turned out, to tread and settle the land, which does a great deal of good over and above their dung.

"For comfort, have a dry shelter yard, or spot selected, and sods of maiden earth, a foot deep are laid over the space of a very large fold. It is then bedded thinly with rushes, leaves of trees, fern, moss, short straw or stubbles; and in hard or wet weather, the flock, instead of being penned upon the clover in the open fields, is put into this warm fold, where the usual quantity of hay is given to them in racks; and every night they are so penned, the fold is fresh littered.—When this has been continued, at intervals, during the winter, a layer of lime, chalk, rubble, or ashes, six inches thick, is spread over the whole surface, and when it has heated together about the month of April, the whole is turned up and mixed together, and makes the very best manure that can be used for turnips. For clover on light land, clay, or marle, ought always to be carted and pretty thickly scattered, then sow it with vetches, which are nearly as valuable as the clover, and wheat always grows remarkably kind after them.

"The Norfolk plough is the best, and upon a light soil, it is certainly preferable to any other; it ploughs a cleaner furrow, by completely moving the whole body of earth, and inverts it much better than any other plough. It is the draft of an ox less, than almost any other plough The Norfolk turnip harrow is also very useful for harrowing what we called brush turnips, preparatory to their being hoed. The drill roller also, it consists of cast iron rings, made at the Norwich foundery, and slipt on upon a round piece of wood, as an axle-tree; deep sowing of grain is the best because it takes better root and one quarter of the quality at least is cured; take off the tops of beans, just as the blossom is set, not only improves the quality, and causes them to ripen sooner—cabbage are also very profitable to feed stock and sheep.

"One hundred and forty acres of land, sown in wheat and rye, upon the most moderate calculation, produced 3,360 bushels of grain, and allowing six bushels to a human mouth, this give a yearly provision in bread for 560 people, besides fattening of 140 oxen, the breed of 800 sheep, and the growth of at least 5000 bushels of oats and beans, which is all done by oxen, and all of which is thrown thereby into market.

(Signed)
NATHANIEL KENT.

Craig Court, England,
30th October, 1789.

ON THE BEST MODE OF HARVESTING INDIAN CORN.

Eastern Neck, Kent County, Md. June 20, 1822.

J. S. Skinner, Esq.

Having derived much valuable agricultural information from your useful paper, I conceive it incumbent on me in return, to communicate to my brother farmers, any improvements or discoveries, in my experience to facilitate the operations of farming.

Much has been said in your paper, upon the subject of gathering and securing the crop of Indian corn. Some writers recommend cutting down close to the ground, with the stock, blades, and ears together. Others object to this method, on account of the loss of the blades, which cannot be dispensed with on farms that do not raise hay, to supply the place of blades. Another objection is, that the blades below the ear will decline, before the corn is sufficiently matured to cut down.

The plan I have pursued for two years past in securing my corn, I am so well satisfied with, that I never expect to abandon it. It obviates the objections to the system of cutting down, and is in my estimation, infinitely preferable to the usual method of gathering corn. My object in writing this letter, is to give you an account of the process of this plan, that you may, if you think it of sufficient importance, communicate it to the public.

As soon as the corn will bear it, the blades below the ear are stripped off and secured in the usual way. The stock, with the ear and top, is then cut close to the ground with common butchers' knives, having square wooden handles, the same as we would cut tops with in the usual way, fixed at right angles in the lower end of a stick, the thickness of a hoe handle, and about three feet long; or, to shew the instrument on paper thus: ———|–. The cutters with this instrument, cut the stock close to the ground with one hand, holding it in the other, and when the holding hand becomes full of stalks, they are thrown crossways the furrow, like tops when cut as usual, each cutter taking two rows, and then throwing together across the furrow the middle one walks in. Hands follow the cutters, to stack their corn, which is done by sitting it up with the bulk end of the stock a little further out than the top, two hundred and forty hills in a stack, or twelve hills by twenty apart. I find this to be about the right size for a stack in the field to stand without tying, and to cure well. By the time a whole field is cut down and stacked, the first cutting will be cured enough to haul off and put in larger stacks, one cart load to a stack, made in the same way as in the field. I make my stack yard adjoining my feeding yards; and as the corn is husked out, the stacks are put in ricks, to be fed to the cattle during the winter. These stacks will stand the whole winter, and the corn is as good as if in the corn house. But it is unnecessary to let them stand, for you may husk them out before your neighbours are done gathering in the usual way.

The advantages I find in this plan are these: that I can cut and stack my corn in the field, as soon as I can secure my top fodder after pulling blades; that the hands that would be employed in sitting up corn and hoeing, in seeding wheat among the stalks can draw the corn off the field before the seeding ploughs, and stack it where it is to stand, and be husked out; that I have double the corn provender for my cattle obtainable in the old way of gathering corn, and can make more than double the quantity of manure; that my corn is gathered and secured by the time I have finished seeding wheat, that I have no occasion of carting over my wheat, perhaps through mire, to gather corn, nor is any of it left covered up in the ground in seeding wheat; and finally that my corn is sounder, heavier, and reputed the best corn that is carried to the Baltimore market, since I have adopted this plan.

I am Sir, your's, &c.
JAMES RINGGOLD.

P. S. I omitted to state that I consider my wheat crops to be better, on account of the wheat being better put in, and no carting on it after the corn is removed. J. R.

* * *

Extract of a letter to the Editor, from a respectable farmer, dated near BEVERLY, YORKSHIRE, *Enlgand, 7th March*, 1822.

"Mr. Tollet is a very good man, and has a large fortune, and has paid particular attention to the Merino Sheep, which have not answered. My sheep are of the long woolled sort—the staple of those a year old, when first clipped, being about from fourteen to seventeen inches long, and the fleece weigh about twelve to fourteen pounds. The rams when eighteen months old, will weigh about twenty-two to twenty-four pounds a quarter. One of my farms is a very high situation, on cold thin land, with a limestone bottom, and within these ten years past, we have improved it beyond idea, by manuring it with crushed bones for our turnip crop. My farm is ten miles from market, which precludes the possibility of obtaining any thing but what we call hand manure and I have for these ten years past expended £400 sterling, in the purchase of old bones, which have answered the purpose extremely well. I have imported them from Hamburg, and on their sort of soil they are generally used, though they do not answer for strong tenacious soils."

EXTRACT OF A LETTER.

Ouachita, Feb. 4th, 1822.

"I shall, with pleasure, continue the Meterioric Register, as it effectually has a tendency to make our climate well known; and we all owe to our country to throw our mite into the general mass of knowledge.

"I recollect what I once told you about *Barrilla Salsola*,* viz: that the culture of that plant would be most valuable where salt marshes are not wanted for the culture of other plants. The common process for rendering them fit for culture tedious and expensive; but *Barilla* will grow well there, and, after two or three crops, will have sufficiently extracted the too great quantity of salt contained in those marshes; for, it has the property of decomposing and absorbing it in its growth.

"The soil most impregnated will thus be sweetened and rendered fit for the cultivation of any thing else. I saw, in my last tour through the United States, a quantity of land of that description which could thus easily be turned to the most useful culture, and which is now waste and useless to the owners even in the most favourable situations."

FOR THE AMERICAN FARMER.

TO EXPELL RATS AND MICE.

Take one or more (of either) alive, and baste, or wet it or them well with a mixture of about equal quantities of train oil and tar, (the tar alone would be rather too stiff) then let it or them go. The consequence will be, that feeling so unpleasant, they will run through every hole and avenue haunted by their tribe; and baste and daub the whole family; and render them so uncomfortable that they will very soon leave the premises. They will become so affected, that many will become entirely blind by the tar getting on their eyes; and will run at random, may be trod on, or knocked over with a stick. This experiment may be relied on as perfectly adapted to the purpose.

Wishing well to husbandry,
I am yours, &c.
GIDEON DAVIS, Manufacturer.

George Town, Dec. 6th, 1822.

* * *

Selections from late numbers of the London Farmers' Journal, received at the office of the American Farmer.

REMEDY FOR HOVEN OXEN.

SIR, *Stone, Cornwall, May* 14, 1821.

It was my intention to have replied to a letter inserted in the Farmer's Journal some time since, signed by *A Young Wiltshire Farmer*, wherein he states that he had a beast fed on turnips, which frequently became prodigiously blown out in the hide, and which, particularly about the flank, was as hard as a board. I have often had cattle so disorded, by eating turnips or green clover, and have found hogs'-lard (either mixed with salt, or without,) an infallible remedy. I have a couple of lumps, each about the size of a pullet's egg, put down the throat with the hand; the person who does it holding fast the tongue at the same time, rather out of the mouth, and upon withdrawing it the animal immediately swallows the lard. I generally mix about a tea-spoonful of salt with each ball of lard. The effect appears to be, the *discharge of wind upwards*, as eructation immediately follows; and it is not improbable but that the stomach might be deprived of this salutary action by the swollen state of its contents. If you think this worth insertion, as information from a correspondent, it is at your service, and that of the public.

I am, Sir,
Your obedient servant,
J. M. BLIGH.

ON WHEELS.

SIR, *Alconbury, May*, 17, 1821.

The remarks of the *Leicestershire Farmer* in your Journal of the 14th current, have induced me to trouble you on this subject, as I consider he has ascribed disadvantages to the cylindrical wheels, which the conical wheels are equally liable to. He says, that cylindrical wheels, when going on the centre of a curved road, press on the inner edges, and that, when the side of the road. the pressure is on the inside of the one, and outside of the other. Now it is evident, that if the hoops of conical wheels press with a flat surface on a level road as the cylindrical wheels, they must press in the same way on all roads as the cylindrical wheels. As to his experiments of the two wheels laid down on their sides; it is a position I never wish to see mine in and can have nothing to do with the merits of either. I have used the cylindrical wheels with straight axles, for the space of 10 years, with complete success, and I beg leave to state, that I am convinced, when properly constructed, that they are stronger, wear the roads less, and are of easier draught to the horses than the conical wheels. The wheels I use are four feet six inches high, and six inches wide in the hoop; six of the spokes are perpendicular, or at right angles to the axle, the other six alternate spokes are placed in the nave, their own breadth nearer the inside, and terminate in the centre of the fellies, as the others: conical wheels of the same dimensions, say the diameter of the inside is four feet eight inches, and outside four feet four inches, the circumference of the outside must be one foot less than the inside; therefore it is quite evident, that for every revolution the wheel makes, the outside must drag one foot. For those that want theoretical information on this subject, I would recommend them to read Dr. Brewster's remarks on wheel carriages, in his Appendix to Ferguson's lectures on mechanics, published in 1806. As I flatter myself I have made some other improvements in the construction of wheels and carts, which would take up too much of your valuable Journal to describe in my circuitous way, I intend sending one to Mr. Coke's useful meeting in July, where it will speak for itself.

I am, Sir,
Your obedient servant,
J. C.

☞ The remarks quoted as being made by the *Leicestershire Farmer*, were added by the Editor. We admit that the case in this is similar both ways; but why should the Bill assume that the cylindrical wheels *roll on a flat surface?* The very respectable writer of this letter contends for the superiority of the cylindrical wheels, although he has stated a method of making them approximate to the conical ones in regard to lateral pressure. We are glad to hear that he is going to Holkham, where all that is useful and meritorious is *meritoriously* encouraged, and where claims of this sort are advantageously discussed.

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* *This plant yields the Soda or Mineral Alkali, abundantly. Its uses in the manufacture of soap and glass, &c. are well known—the writer of this note has made some attempts to introduce its culture in the United States, but hitherto with little success. Doubtless it would flourish here, and particularly in those climates which are analogous to those of the Mediterranean, Alicant for example, where it is an important object.*

Washington City, April 14, 1822. *J. M.*

We therefore say no more on the subject in this place. Our correspondent will observe that we have omitted his remarks on the duties necessary on foreign corn; which although very sensible and correct, come too late to be of any service.

Edit. Farmer's Journal.

ON THE SUSTENANCE OF THE POOR.

Essex, *May* 14, 1821.

Sir,

In answer to your correspondent on the subject of feeding the Poor, dated Berkshire, 9th April, 1821, signed *J. H.*, I beg to make the following observations. This person expresses himself as follows:

—"Should any of your numerous readers see objections which are not discernable by me, I shall esteem their observations a favour." In order to point out the most prominent feature of his letter, I shall quote his own words. "The paupers of England, either in or out of workhouses, live in a degree of luxury unknown to the lower orders of the greater part of the continent of Europe, or the hardy and robust natives of Scotland and Ireland. Good wheaten bread, with a proportion of animal food, is the diet of the generality of English paupers." Would this person wish English paupers to be denied the *luxuries* of wheaten bread and animal food, who, through want of employment, may become objects of relief, or whose large families may render their earnings inadequate to their support? It has been stated, and I think rightly, that want of means of consumption is a most operative cause of the depressed prices of agricultural produce: if all the paupers in England were denied the use of wheaten bread and animal food, the consumption would certainly be again very much diminished. Probably two thirds of the labouring poor in England are at present more or less paupers. Can *J. H.* wish English labourers, becoming paupers, through large families or misfortune, to be fed as the poor are in Scotland, on oat and barley meal mixed, with a portion of sour milk; or, as they are in Ireland, on potato and salt? This mode I think would not be polite; and I beg to ask, if it would be humane? The transition from bad living to good is very easy and pleasant, but to decline from good living to a mere existence, is heart-breaking and miserable. In such a case, would there be any encouragement to grow wheat or rear stock? Why do we get so much corn and meal from Scotland and Ireland? For this reason because the majority of the inhabitants cannot afford to use them. In the like case, if the majority of the inhabitants of England were debarred from the use of wheaten bread and animal food, where would there be a sale for them, and what would be the use of producing them?

Your correspondent goes on to say, "Oatmeal prepared in a variety of modes, rice, potatoes, and other vegetables, always afford a much more economical mode of maintenance, than wheaten bread or meat." Rice, it appears, is to be preferred to our own wheat, though the growth of America and the East Indies: surely this person must have taken a very erroneous view of the subject. I beg him to reflect on the result of his own thoughts, whether, if they could be complied with, they would not do more harm than good. Two questions more I beg to ask: How are commerce and trade to be maintained, if at least half of the inhabitants of England live upon oatmeal, rice, potatoes, and other vegetables?—And how is the revenue to be raised without the use of exciseable goods, under the present mode of taxation?

Your's, &c.
JOHN BULL.

ROADS AND WHEELS.

In looking over the proposed new turnpike bill, printed this Session, we find the clause relating to *roads and wheels*, very properly omitted; the weighing machines are proposed to be continued, which we also consider as very proper, if it be only to prevent cruelty to animals, which might be otherwise induced by gain. It is, however, doubtful whether any allowance in toll ought to be made for wheels more than six inches wide; because the wheels themselves are part of the load, and the improved method of making turnpikes does suppose the utility of rollers that will nearly cover two stones each eight inches across, or go between them without making them lift up at either end. Wheels of six inches might pay according to weight and horses, (six to eight horses, and four to six tons), and *narrow wheels* (1 to 2¼ inches,) not to be allowed to carry more than a given load—suppose four horses and three tons—exclusive of the carriages. One thing of peculiar importance the act provides,—namely, that the soles of the wheels, of whatever width, shall be *even* and *flat*: this, we believe, will soon put an end to very broad wheels; for unless by shoeing them with a central thick sole, or by making the rim barrel-shaped, they could have made them run almost as easy as narrow wheels, they could not have availed themselves of the advantages of heavy lading, and exemptions from weighing.

NEWLY INVENTED BOAT.

North Berwick, *May* 18.

About eight o'clock this morning, a novelty unknown in this place before, attracted the attention of a numerous assemblage of spectators. A boat manned by four men, proceeded from this harbour, to Canty Bay, a distance of two miles and, after refreshing the crew, proceeded round the Bass Rock, and returned about a quarter past nine, having performed their voyage in the space of an hour and a quarter, gross time, being upwards of six miles, the whole performed without either sails, oars, or any steam apparatus. The invention is entirely that of a respectable millwright here, who expects a patent before he publishes the means of impulsion.

MATCH TO DO ONE HUNDRED MILES IN TWENTY-FOUR HOURS.

This match was undertaken on Thursday, by Mr. Pendergrast, a yeoman, in Oxfordshire, for a stake of 200 guineas. The pedestrian had trained for the match during the last month; the ground over which he travelled was a circle of five miles from Woodbridge, Oxon, of turf and road; he started at four o'clock in the morning, and performed the first five miles in 48 minutes; he continued to mend upon his pace until he did 25 miles in ten minutes under four hours; he halted an hour, ate a hearty breakfast of chops, and then proceeded on at between five and six miles an hour, until he had done forty miles, when he halted about two hours; and at two o'clock he had gone a mile over half the distance.—He kept on steadily, and did the next twenty miles in four hours, when he again took refreshment and slept; he had seven hours to do the remaining 30 miles; he kept on at the rate of five miles an hour until he had completed 90 miles, when he fell lame; he had something under three hours to do the next ten miles in, but he could only reach the 92d mile, when he was obliged to resign the herculean labour. It was even betting on the event.

PIGEON MATCH FOR ONE HUNDRED GUINEAS ASIDE.

A sporting match was decided on Saturday se'nnight, on Chobham Heath, Surrey, between three gentleman of Oxfordshire and three of Hampshire, viz. Messrs. Bartleman, Harris, and Goatley, of the former county, and Messrs. Grosvenor, Kemp, and Harrison, of the latter, at eleven birds, 21 yards from the trap. Hampshire won by one bird only. The parties made another match for the same stake, at 21 birds, to be shot for on Monday, (this day.)

WHARFDALE AGRICULTURAL SOCIETY.

The annual Meeting of this society was held at Otley, and was most numerously and respectably attended. The show of Horned Cattle formed decidedly the best part of the exhibition; that of Horses was very inferior. A number of agricultural implements were submitted for public inspection, particularly some produced by the Rev. J. A. Rhodes, of Horsfirth, which merited and appeared to gain, general approbation.

After the business of the exhibition was concluded, the company adjourned to dinner. In the course of the afternoon, the decision of the Judges was announced, and the premiums were immediately paid. *Several of the gentlemen most disinterestedly returned them, for the benefit of the institution.*

* * *

FROM THE NEW YORK STATESMAN.

THE USEFUL ARTS.

We this evening have the satisfaction of publishing another interesting communication from our correspondent Hopson, *on the colouring of Scarlet.* It will be found a valuable article, both to the man of science and to the practical manufacturer. It affords us pleasure to state, that our correspondent is now preparing a practical treatise on *the dying of Woollens*, which will be published between this and the next autumn. There is no work of the kind in this country, and such a publication, at a time when woollen manufactories are springing up in all directions, is a great desideratum. The talents and experience of *Hopson* justify the most sanguine anticipations of the ability and usefulness of his contemplated treatise.

Messrs. Editors—In two papers signed Hopson, I critisised on several parts of the theory of dying, as advanced by Dr. Cooper, in his work on that subject. I shall take the liberty of rectifying one other error, through the medium of your paper, which must have had a tendency to bewilder the mere practical artist.

P. 24. "Aquafortis, or strong nitric acids colourless. This will be wanted to make the scarlet composition. It ought to be freed from sulphuric acid by nitrate of barytes, and from muriatic acid by nitrate of silver."

This hypothesis is directly opposed to the practice of the most eminent dyers, nor will it hold good in theory. Muriatic acid must always be present to enable the nitric to hold the tin in solution; and it is customary to mix one-eighth of muriatic acid with the nitric before any tin is added. Sulphuric acid is never considered as at all injurious, provided it be free from iron.

There are but too first rate public scarlet dyers in the west of England; both of them use single aquafortis slightly tinged with orange coloured fumes; one of those dyers adds fine salt to this composition for scarlet, and the other, the abovementioned portion of muriatic acid.

I shall take this opportunity of disclosing a fact, relative to the scarlet composition, which I discovered in the year 1807, and which has never before been made known. I was then engaged in making experiments in London, at the laboratory of Mr. Wm. Bryan, sen'r,* for the purpose of ascertaining the precise effect, produced by the mordants on the materia tinctoria. My experiments were not confined to the effect which a single mordant has on a given colouring matter: it was extended to ternary and even quaternary compounds.

Whilst so employed, I put into a phial of aqua-regia as much pulverised tartar, as I had been accustomed to use in the dying furnace, with the same portion of acid. The bottle was labelled and laid by on a shelf. About two months afterwards, I was engaged in experimenting on the colouring matters producing yellow, when I used some of the aforesaid liquor, with a decoction of the morus tinctoria, (old fustic.) The effect produced was astonishing, the colour being far more brilliant than any I have ever seen produced from the same material, and it has proved after the most severe trials, to be as permanent, as it was beautiful. On examining the last of patterns in April 1821, I found all the other yellows were faded, whilst that one had retained its original body and lustre.

Doctor Bancroft had previously established the fact, that scarlet was produced by a portion of the cochineal being yellowed; and I inferred at the time I made the experiment, that the tartaric acid of the super-tartrate of potash, was the only material by which that effect was produced. I soon after communicated this idea to Doctor B. and in his second volume published subsequent to my information, he has given it as his opinion, observing that tartaric acid was too dear to be used for that purpose.

In the year 1810 I made some experiments on cochineal with the same mixture, and the colour produced answered my most sanguine expectation. This colour was very brilliant, and well grounded, and on trial I found it would stand washing, and exposure to atmospheric changes, much better than any scarlet dyed after the common mode.

I have long wished for an opportunity of entering on a course of experiment, to ascertain the best proportion of materials, in preparing this nitro-murio-tartrate of potash, and the exact quantity to be used to produce the best colour, with any given quantity of cochineal. I have no doubt the result would be highly valuable to the dyer of scarlet, as the expense of producing the colour would be much lessened, and the acids consumed much smaller in quantity.

The proportion of aqua-regia, nearly saturated with tin, used in the old mode of dying scarlet, is three pounds to one of cochineal. The materials are added when the liquor is boiling; the acids first, and the others in succession:—soon as the cream of tartar is precipitated into the liquor, a curdling appearance immediately takes place, which will soon precipitate, if permitted to rest. When the cloth is washed after dying, the filth extracted is of a white colour; and when the spent liquor is thrown away, a large quantity of white precipitate is always found in the bottom of the furnace, a considerable portion of which is evidently metallic.

The following appears to be the true rationale of scarlet dying; at least, such are the inferences I have drawn from the experiments before related, and from the effects of the old process.

The cream of tartar is decomposed by the nitro-muriatic acid. The potash, of the tartrate of potash, combines with a portion of the aqua-regia of the nitro-muriate of tin; the tin is liberated, and forms the before mentioned white precipitate; and the tartaric acid being also liberated, combines with the colouring matter, and, together, with the remainder of the nitro-muriatic acid, is the means of forming this beautiful colour.

The cream of tartar which I put into the nitro-muriatic acid, as related in my experiment, is gradually decomposed, and the tartaric acid liberated.

The effect produced by these processes, are similar; but the latter is more direct, less complicated, and less expensive.

HOPSON.

THE SEASON.

We have distressing accounts that a severe drought has been experienced in Maine, New-Hampshire, and parts of this state: and that prayer meetings have been held to supplicate for rain from heaven on the parched earth. On Monday there were appearances in several quarters of settled rain; and it commenced in Salem in the afternoon, and in this vicinity in the evening: but not in quantity sufficient to refresh the thirsty earth. The appearances, however, yet continue, and promise to bless the hopes of the husbandman. But " all signs fail in a dry time."

The crop of hay in this state it is feared will not exceed half the quantity cut the last and preceding years. Much of the clover and other grasses were winter killed, and much of those which survived suffered for want of rain in the spring. The grain and fruit prospects are good. The vegetable tribe abundant.—*Boston Cent.*

THE FARMER.

BALTIMORE, FRIDAY, JULY, 12, 1822.

☞ Our correspondent " Readers," will find that his enquiry as to WHEELS shall be attended to.

* * *

☞ The prices of the present week much the same as last report—the quantity of grain in market very small, and the demand uncommonly limited :—White wheat, $1 30 to $1 35—Red, do. $1 25 to $1 27—White corn, 70 to 72 cts.—Yellow do. 70 cts.—Rye, 60 to 65 cts.—Wharf flour, $6 50, credit of 60 and 90 days—do. from the wagons, $6 62—Shad, No. 1, $7 25 to $7 50—No. 2, $6—Herrings, No. 1, $3 to $3 25—No. 2, $2 75 to $3.

MARYLAND TOBACCO—Not a single hogshead sold the present week that we can hear of.

VIRGINIA TOBACCO—10 hogsheads Richmond, sold for $7 25.

TURNIP SEED.

TO FARMERS.

J. W. Cragg has on hand, and offers for sale on reasonable terms, a quantity of turnip seed, saved this season from roots of his own raising, and of the following kinds, viz: The English Red Round, Norfolk White, Yellow Scotch, and the Swedish or Ruta Baga; being all of superior quality: he having raised from the same kinds of seed last year, a great crop of turnips; many of the largest of which weighed from 15 to 19 lbs. each; and this great weight was obtained in about twelve weeks; and yet they were quite sound, and of superior quality. The above seed may be had by applying at the corner of Spring street and the Philadelphia road, or on Captain E. L. Finley's farm. Printed directions will be given with the seed for the proper cultivation of turnips, he having had several years experience of their culture in one of the best managed districts of England.

Directions for the proper cultivation of Turnips.

Let your land be made perfectly clean by good ploughing and harrowing, and let it be well manured, and on the first appearance of rain, about the last week in July or the first week in August, plough your land, and sow your seed on the fresh mould, at the rate of about two pounds to the acre. After your turnips are up, and have leaves as big as half a dollar, if they appear too thick, let them be harrowed once over, and if they still appear too thick, harrow them again; taking care to cross at right angles. When they have got leaves the bigness of a dollar, let them be hoed if possible, twice over, leaving the plant at least twelve inches apart.

Short Horn Stock.

The following animals which received Premiums at the late Philadelphia county Agricultural Exhibition, are for sale.

TOM JONES, a Bull Calf of 10 months from Cherry, by George, (the sire of Bergami,) both derived from Mr. Heaton's importation of Teeswater stock. He took the first Premium for Bull Calves.

PRIZE, an Heifer of 3 years, by the imported Bull Denton. She took two prizes at the Worcester County Cattle Show, as well as a Premium of Forty Dollars, at the Philadelphia County Exhibition.

JULIA, an Heifer of 19 months by the imported Bull Denton, from an imported Devon Cow. She also took a premium of Twenty Dollars at the Philadelphia County Exhibition.

STEAM BOAT, a Cow remarkable for her great size, heavy hind quarters, great length and short legs. She took the third premium at the Philadelphia County Exhibition.

CHERRY, the dam of Tom Jones, with very small bone and heavy hind quarters.—*Apply to the Editor.*

Pedigree of the thorough-bred improved Durham Short Horn Bull Denton, bred by Mr. John Wetherell of Kirkley, Leicestershire, one of the first breeders of Short Horn Cattle in England.

He was got by Old Denton, dam by Baronet, grandam by Cripple, great grandam by Irishman. Old Denton was by Comet, grandam by St. John, great grandam from Old Danby.

Mr. Heaton's cattle were produced by a brother of the celebrated, Barningham Ox.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, at the North West corner of Market and Belvidere-streets, Baltimore, *where every description of Book and Job printing is executed with neatness and despatch*—Orders from a distance for Binding, with proper directions, promptly attended to.

I have never been acquainted with a better practical chemist than Mr. Bryan, senior. It is to this gentleman I am principally indebted for the little chemical knowledge I possess. In the years 1807 and 8, we attended a course of private chemical lectures, from the celebrated Frederick Accum, together with Messrs. Thomas and William Bryants, now operative dyers in this city. Mr. B. senior, has lately arrived from Liverpool. Every thing that can be performed by a combination of practical and theoretical talent, may be expected from these gentlemen.

HORTICULTURE.

POMARIUM BRITANNICUM,

An Historical and Botanical account of Fruits, known in Great Britain, by Henry Philips.—Second Edition.

(Continued from page 121.)

APPLE-TREE.—MALUS.

In Botany, a species of the Pyrus, belonging to the Genus of Icosandria Pentagynia.

That the apple-tree is a native of the Eastern part of the world, we have the authority of the earliest writers, both in the Sacred History, as well as by the information given by the naturalists of ancient Greece and Rome. The Prophet Joel, where he declareth the destruction of the fruits of the earth by a long drought, mentions the fruits which were held in estimation, and among them he names the apple-tree.

"The Greeks call them *medica*," says Pliny, "after the country from whence they were first brought in old times." Others were called *epirotica*, from Epirus, their native country; and that these were the same species of fruit that we call apples at this time, there can be no doubt; as they are described in Pliny's Natural History as a fruit that hath a tender skin to be pared off; and he mentions crabs and wildings as being smaller; "and for their harsh sourness, they have," says he, "many a foul word and shrewd curse given them."

Apple-trees, from the earlier accounts, seem to have required the fostering care of man. Of all the fruit-trees in Italy, Pliny says the apple is the tenderest, and least able to bear heat or cold, particularly the early kind that produces the sweet Jennitings. For a long time the apple-tree was of the highest value among fruit trees with the Romans: "there are many apple-trees," says Pliny, "in the villages near Rome that let for the yearly sum of 2,000 sesterces," which is equal to £12 10s. of our money; "and some of them," says this author, "yielded more profit to the owner than a small farm, and which brought about the invention of grafting. There are apples that have ennobled the countries from whence they came; and many apples have immortalized their first founders and inventors.—Our best apples," continues he, "will honour the first grafters for ever; such as took their names from Matius, Cestius, Manlius, and Claudius." Pliny particularizes the quince apples, that came from a quince grafted upon an apple stock, which he says, smell like the quince, and were called Appiana, after Appius, who was of the Claudian House, and who was the first that practised this grafting. "Some apples," says Pliny, "are so red that they resemble blood, which is caused by their being at first grafted upon a mulberry stock;" but of all the apples he has mentioned, he says that one which took its name from Petisius, who reared it in his time, was the most excellent for eating, both on account of its sweetness and agreeable flavour. He mentions nine-and-twenty kinds of apples as being cultivated in Italy at about the commencement of the Christian era. The grafting of trees was carried to its greatest extent about this time. "I have seen," says Pliny, near to Thuliæ, in the Tyburtines country, a tree grafted and laden with all manner of fruits, one bough bearing nuts, another berries; here hung grapes, there figs; in one part you might see pears, in another pomegranates; and, to conclude, no kind of apple or other fruit but there it was to be found: but this tree did not live long." Modern grafters will condemn this account as fabulous or exaggerated; but what reason can we have to doubt the authority of a man, whose life was spent to the benefit of mankind, and whose death was caused by his perseverance in the research after truth in the wonderful works of nature?

Sextus Papinius, it is said, brought two kinds of apples to Rome, in the 21st year of the reign of Augustus Cæsar: the one called Jujubes, out of Syria; the other, Tuberes, he brought from Africa; but their fruit, according to Pliny's account, rather resembled berries than apples.

The wild Crab is the only apple indigenous to this country; and it is on this stock that most of our valuable apples have been grafted and raised by the ingenuity of the gardeners, who have, by sowing the seeds and studying the soil, so improved and multiplied the variety of this most excellent fruit, that it has now become of great national importance, affording an agreeable and wholesome diet, in a thousand shapes, to all classess of society.

It was not until the 16th year of the reign of Henry the VIIIth, that Pippins were first introduced into England, by Leonard Maschal, who, in Fuller's words, "brought them from over sea," and planted them at Plumstead, in Sussex, a small village on the north side of the South Downs, near the Devil's Dyke. Maschal brought the first carp to England, and thus, at one time, furnished our orchards and our ponds with the rarest variety of each kind.

The Golden Pippin is a native of Sussex, and is said to have been first reared at Parham Park, which is also situated on the north side of the South Downs. The Dutch acknowledge it to be an English apple in their catalouge of fruits, where it is called the "Engelsche goud Pepping." The French call it "Pippin d'Or," which is a translation of the English name.

Catherine, Empress of Russia, was so fond of this apple, that she was regularly supplied with it from England; and in order that she might have it in the greatest perfection, each apple was separately enveloped in silver paper before it was packed.

The Ribston Pippin is a native of Ribston Park, Yorkshire. Hargrave, in his History of Knaresborough, (p. 216,) says, "This place is remarkable for the produce of a delicious apple, called the Ribston Park Pippin. The original tree was raised from a Pippin brought from France, from which tree such numbers have been propagated, that they are now to be met with in almost every orchard in this and many other counties." The old tree is yet standing; and in the year 1787 produced six bushels of fruit. Mr. Speechly says, he has seen the tree within these last few years, and that it was without decay, or any indication of dissolution.

Hargrave adds, "This fruit still retains it's value, being preferred before every other apple this country produces." While my namesake of Herefordshire says,—

Let every tree in every garden own
The Redstreak as supreme; whose pulpous fruit
With gold irradiate, and vermillion, shines
Tempting, not fatal, as the birth of that
Primeval interdicted plant, that won
Fond Eve in hapless hour to taste, and die.
This, of more bounteous influence, inspires
Poetic raptures, and the lowly Muse
Kindles to loftier strains; even I perceive
Her sacred virtue. See! the numbers flow
Easy, whilst, cheer'd with her nectareous juice,
Her's and my country's praises I exalt.
Hail, Herefordian plant, that dost disdain
All other fields! Heav'n's sweetest blessing,
hail!
Be thou the copious matter of my song,
And thy choice, nectar! on which always waits
Laughter and Sport, and care-beguiling Wit,
And Friendship, chief delight of human life.
What should we wish for more? Or why, in
quest
Of foreign vintage, insincere, and mixt,
Traverse th' extremest world? Why tempt the
rage
Of the rough ocean, when our native glebe
Imparts from bounteous womb annual recruits
Of wine delectable, that far surmounts
Gallic or Latin grapes, or those that see
The setting sun near Calpe's tow'ring height.
Nor let the Rhodian nor the Lesbian vines
Vaunt their rich must, nor let Tokay contend
For sov'reignty; Phanæus' self must bow
To th' Ariconian vales.

Gerard who wrote his History of Plants about seventy years after the introduction of Pippins, has given no account of this variety of the apple. He describes but seven kinds: the Pome Water, the Baker-ditch apple—the king of apples, the Quining, or Queen of apples, the Summer Pearmain, the Winter Pearmain, and the Paradise apple. In his descriptions of apples, he says, "The fruit of apples do differ in greatness, forme, colour, and taste; some covered with a red skin, others yellow or greene, varying infinitely according to the soyle and climate; some very great, some little, and many of a middle sort; some are sweet of taste, or something sour; most be of a middle taste, betweene sweet and sour; the which to distinguish, I think it impossible, nowithstanding I heare of one that intendeth to write a peculiar volume of apples, and the use of them." This author continues, "The tame and grafted apple-trees are planted and set in gardens and orchards made for that purpose: they delight to grow in good and fertile grounds. Kent doth abound with apples of most sorts; but I have seen in the pastures and hedge rows, about the grounds of a worshipful gentleman dwelling two miles from Hereford, called M. Roger Bodnome, so many trees of all sortes, that the seruants drink for the most part no other drinke, but that which is made of apples. The quantitie is such, that by the report of the gentleman himselfe, the parson hath for tithe many hogsheads of cyder."

"Like as there be divers manured apples, so is their sundry wilde apples, or Crabs, not husbanded, that is not grafted. We have in our London gardens, (Gerard's garden was in Holborn) a dwarfe kind of sweet apple called the Paradise apple, which beareth apples very timely without grafting." From this account we may conclude, that the *Pippin* apples were still rare, or that they had not been cultivated out of Sussex, although I find Gerard must have seen the fruit of the Pippin kind, for in his account of the Pomum Amoris, or Love Apple, he says it is the bigness of a goose egg or a large Pippin. The Pippin appears to have been scarce even in the time of Charles the First; for in the valuation of the fruit-trees at the royal gardens of his queen at Wimbleton, there is only one pippin-tree mentioned.

For some years past, it has been stated by several ingenious writers that many of our best varieties of apples could no longer be cultivated with success; that by length of time they have become degenerated and worn out. Mr. Knight, the president of the Horticultural Society seems to have been the first that gave birth to this idea. He says, in his Pomona Herefordiensis, that those apples which have been long cultivated are on the decay. The Redstreak and the Golden Pippin, can no longer be propagated with advantage. The fruit, like the parent tree, is affected by the debilitated old age of the variety. Again he says, in his Treatise on the Culture of the Apple and Pear, page 6, "the Moil, and its successful rival the Redstreak, with the Must and Golden Pippin, are in the last stage of decay, and the Stire and Foxwhelp are hastening rapidly after them." "It is much to be regretted," says Speechly, "that this apparently visionary notion of the extinction of certain kinds of apples should have been promulgated by authors of respectability, since the mistake will, for a time at least, be productive of several ill consequences."

Having observed among the apples in Covent-Garden market, last year, a great quantity of the real Golden Pippin in a perfect state, I was induced to make particular inquiries respecting this fruit; and have received satisfactory accounts from all quarters, that these trees are fast recovering from a disease, or canker, which appears to have been brought on by a succession of unpropitious seasons; but that the summer of 1818, and the following year, have greatly improved them.

When I had decided to publish this History of Fruits, I waited on some gentleman who are well known in all parts of the world for their practical knowledge in the cultivation of apples. Mr. Hugh Ronalds, jun. of Brentford, informed me that he had lately seen a tree of the Golden Pippin kind, which had been planted against a wall in a south aspect, which was in a thriving condition, and the fruit in a perfect state. Mr. Ronalds, sen. assured me it was the true Golden Pippin, and that there is no fear of losing this variety.

Mr. Lee, of Hammersmith, who politely showed me a variety of 500 kinds of apple trees, was decidedly of opinion that the apparent decay of some trees was owing to the unfavourable springs we have had for several years.

Mr. Knight of the King's Road, Chelsea, has also favoured me with his opinion, which perfectly agrees with that of Mr. Ronalds and Mr. Lee. Mr. Knight added, that if this spring and summer should be as favourable as the two last seasons, he should be able to show me this and other old varieties of the apple-tree in as perfect a state as they have ever been known.

Mr. Knight, the ingenious president of the Horticultural Society, I conclude had watched these trees during the unfavourable wet seasons we have had from the commencement of the present century, and finding the disease increase, he attributed it to the old age of varieties; for, as the great friend of Pomona, his object evidently was to encourage the obtaining and cultivation of new kinds, to replace those which he apprehended would be lost to the country. I have made this digression, to prevent if possible our best apples from being stigmatized as a decaying fruit and unprofitable to the grafter, which would be the cause of their becoming scarce, and, in time, totally lost. I have not presumed to set my judgment in opposition to that of Mr. Knight, who is so justly celebrated for his attention to horticultural pursuits; but it behoves all who may write of this most valuable fruit, to recommend the graftings to be of the best kinds, and to throw out no hint that may cause our nurserymen to neglect it's propagation. Gerard, when he published his Account of the Apple in 1597, was a warm advocate for the cultivation of apples. "Gentlemen that have land and living," says he, "put forward, in the name of God; graffe, set, plant, and nourish up trees in euery corner of your grounds; the labour is small, the cost is nothing, the commoditie is great, your selues shall have plentie, the poor shall have somewhat in time of want to relieve their necessitie, and God shall reward your good mindes and diligence."

Herefordshire has now to boast of a friend to Pomona in Thomas Andrew Knight, Esq. who has, for some years past, been benefiting his country, by creating, if I may be allowed the expression, a new variety of fruits; but before I disclose the ingenious method he has adopted to procure new varieties, it is but justice to departed merit to notice with whom the invention was first deemed possible: and I have great pride and satisfaction in stating, that, after an unprejudiced research, I find this wonderful discovery has been left for the perseverance of the English, who, although late in taking up botanical studies have now surpassed whatever was done by the ancient world in this science.

Lord Bacon, who has been called the Prophet of Arts, and who looked into nature with a most curious eye of inquiry, evidently suspected that it was impossible to cross the breed of plants, and so procure kinds, by art, as novel as those which nature has sometimes produced by accident.

"We see," says the great Verulam, "that in living creatures that have male and female, there is copulation of several kinds, and so compounded creatures; as the mule that is generated betwixt the horse and the ass; and some other compounds which we call monsters.

"The compounding or mixture of kinds in plants is not found out; which nevertheless, if it be possible, is more at command than that of living creatures; wherefore it were one of the most notable experiments touching plants to find it out, for so you may have great variety of new fruits, and flowers yet unknown. Grafting does it not:" adds this great man; "*that* mendeth the fruit, or doubleth the flowers, &c.; but it hath not the power to make a new kind, for the scion ever overruleth the stock."

Bradley, whose works were published in 1718, about a century after those of Lord Bacon, is the first author who wrote on this subject as being accomplished; but the exact method was not then clearly understood, as he only describes it by bringing the branches of different trees together when in blossom; but, on this hint, the gardeners in Holland and the Netherlands practised before it was much attended to in this country, where the discovery was made and published; but, to do them justice, they have the honor to acknowledge that they owe the art to the English.

It now appears to have reached its highest perfection; and I shall proceed to relate the manner in which Mr. Knight has so successfully produced new varieties of apples and other fruits; and although he has most clearly explained himself, yet I have thought it advisable to elucidate it more plainly by plates from drawings, which I have made from the blossoms for the express purpose, knowing how little even the botanical terms are understood by the farmers, and many gardeners in the country.

Mr. Knight, in his *Pomona Herefordiensis*, says, "It is necessary to contrive that the two trees from which you intend to raise the new kind, should blossom at the same time; therefore if one is an earlier sort than the other, it must be retarded by shading, or brought into a cooler situation, and the latest forwarded by a warm wall or a sunny situation, so as to procure the blossoms at the same period."

The apple blossom contains about twenty stamina or males, which are represented in Plate 1. No. 3, and generally five pointals or females, which form the centre of the cup or cavity of the blossom, as in Figure No. 4. The males stand in a circle, just within the bases of the petals, or flower leaves, and are formed of slender threads, each of which terminates in a small yellow ball or anther, as in Fig. 5. As soon as the blossoms are nearly full grown, as in Fig. 1. they must be carefully opened, and all the male stamina cut or extracted, so as not to injure the pointals or females, which will then appear as in Fig. 4. The blossoms are then closed again, as in Fig. 1. and suffered to remain till they open spontaneously.—From the blossoms of the tree, which it is proposed to make the male parent of the future variety, must be taken a portion of their pollen or farina, when ready to fall from the mature anthers, and deposited upon the pointals of the blossoms, which consequently will afford seed. By shaking the blossoms over a sheet of white paper, you will ascertain when the pollen is ready. It is necessary in this experiment, to cover the branches on which the prepared blossoms are, with a thin muslin or gauze, so as not to touch the flowers, or keep off the sun or air, but to prevent the bees or other insects from inoculating them with the pollen of other blossoms, which would make the experiment uncertain; and in order to obtain the fruit and the seeds of a large size, it is best to leave but few blossoms on the tree, and, at all events, to clear the branches on which the prepared flowers are, from all other blossoms.—When the fruit is quite ripe, the pips or seeds should be sown at a proper season, and in suitable soil, and in about four or six years fruit may be expected. Mr. Knight has also made some curious experiments between the peach and the almond, which will be found in the account of the former fruit. Among the new apples which the world have to thank Mr. Knight for, is the Grange apple, which fruited first in 1802, and obtained the prize of the Herefordshire Agricultural Society: it is the offspring of the Orange Pippin and the Golden Pippin. He also obtained the annual premium of the same society, in 1807, for the Siberian Harvey, an apple which fruited for the first time in that year. This tree was raised from the seed of the Yellow Siberian Crab and the pollen of the Golden Harvey. Mr. Knight also raised the Foxley apple, from the seed of the yellow Siberian Crab and the pollen of the Orange Pippin: this fruit also received the premium in 1808, and it is said to rival the Golden Pippin in sweetness.

The cultivation of this, our most valuable fruit, has been attended to with so much care of late years, that one of our great gardeners, (Mr. Hugh Ronalds, of Brentford,) exhibited at the Horticultural Society, in August, 1818, sixteen varieties of apples, and in September he exhibited fifty-eight other sorts, all grown in his own garden, and considered the finest collection ever exhibited. In the month of October of the same year, he exhibited fifty-three sorts, making in the whole a variety of 127 kinds of this our staple fruit, which, in point of real value, takes place of all others, and affords a variety for all seasons of the year, both for the dessert and for culinary purposes, as well as the drink of which Phillips in Miltonian verse has sung,—

Some ciders have, by art or age, unlearn'd
Their genuine relish, and of sundry vines
Assum'd the flavour; one sort counterfeits
The sparkling nectar of Champagne; with that,
A German oft has swill'd his throat, and sworn,
Deluded, that imperial Rhine bestow'd
The gen'rous rummer, whilst the owner, pleas'd,
Laughs inly at his guest, thus entertain'd
With foreign vintage from his cider cask.

Thomson has thus beautifully described the cider season:—

The fragant stores, the wide projected heaps
Of apples, which the lusty-handed year,
Innumerous, o'er the blushing orchard shakes;
A various spirit, fresh, delicious, keen,
Dwells in their gelid pores; and, active, points
The piercing cider for the thirsty tongue.

Apple-wine is admired as a summer beverage, but it is by no means equal to the cider made from Golden Pippins, which, when given in good condition, and well timed, surpasses every other refreshing drink. The spirit extracted from cider is equal to brandy for preserving fruit, or mixing in made wines or liquors.

A solution of iron in the juice of the Golden Rennet, evaporated to a thick consistency, proves an elegant chalybeate.

Dr. Short informs us, that cider was first invented by a Norman, who much admired the delicate flavour of apples; and "long observation," says he, "assures, us that such as chiefly drink cider, are more healthy and strong, and have better complexions, than those that are accustomed to wine or ale." Both Lord Bacon and Dr. Baynard tell us of several persons near a hundred, and some above, who, having seldom used any other liquor, were very active and vigorous at that age. It is certainly more nourishing than wine, for not being so thoroughly fermented, its spirits are less subtile and impetuous.

"There is made an ointment," says Gerard, "with the pulp of apples and swine's grease and rose-water, which is used to beautify the face, and to take away the roughness of the skin, which is called in shops pomatum, of the apples whereof it is made."

As the Horticultural Society of this country has been established for the purpose of benefitting the world by their attention to the improvement of our various fruits, and as I know it to be a part of their study to induce the planters of orchards to cultivate and propagate the best kinds of apples only, I trust that by their attention we shall soon have our markets supplied with a superior kind of apples to what is now generally offered for sale, as the same land that will produce an ill-flavoured apple will afford a good one; and it is as easy to raise the best kinds of apple-trees as those of inferior value.

The Siberian Crab Apple was not cultivated in this country until 1758, and the small fruited variety was first introduced in 1784. The flavour of this latter kind is highly esteemed in tarts and puddings, and the tree is often planted as an ornament in our shrubberies.

In pruning apple-trees, nothing more should be done than to cut out all those branches which cross each other, to prevent the rubbing of the bark; but never to shorten any of their shoots, except those shoots or suckers which proceed from the stem, which should be entirely taken off, as also all branches broken by the wind or accident, which should be cut off close to the division of the branch. November is the best time to prune apple trees, as it injures them to prune in frosty weather, or when the sap begins to rise. Pruning is to be avoided as much as possible, as it creates useless shoots, and prevents the fruiting; but if trees are becoming too full of branches, which will be the case in espaliers, the better way is to rub off the buds and shoots which are irregularly produced, in the growing season. All sorts of apples produce their fruit upon cursions, or spurs, therefore it is necessary to be careful not to cut off or destroy them, as they continue to be fruitful for several seasons.

The apples intended to be preserved for the winter should remain on the trees until quite ripe, when they should be gathered in dry weather, and placed in a heap for five or six weeks, in order to sweat: they should then be carefully wiped dry, and those that are perfectly sound, packed in large jars or boxes so as to be excluded from the air, which will keep them sound and plump, and retain their flavour.

I have found the wood of old apple-trees, when used as a fuel, produce a most agreeable perfume.

The various diseases to which the apple-tree is subject, have occupied the attention and the pen of some of our greatest naturalists, as well as many of our eminent practical gardeners.—Animals of different species are found to engender a variety of kinds of animalculæ, particularly where cleanliness is not attended to. Trees, according to their kinds, attract different blights: our endeavours, therefore, would be in vain to avoid the blight affecting the leaves and blossoms of large trees; but as the trunk and branches of the apple-tree are often injured, and sometimes destroyed, by animalculæ, an attention to the cleanliness of these trees cannot fail of being beneficial to their growth. It has therefore occurred to me, from observations and experiments I have made since compiling this work, that if the trunks of the apple-trees were rubbed with the leaves and young shoots of the elder, to which all kind of blight hath an antipathy, that those injurious although minute insects would not only be destroyed, but that it would prevent their fixing themselves on these trees. As this is a matter of importance to the public, I shall feel obliged by the remarks of any gentleman who may be disposed to try the experiment.—The canker of apple-trees, I apprehend, is principally occasioned by the uncongenial quality of the soil. I lately travelled with a gentleman, who informed me, that having observed all his apple-trees became cankered at a certain state of growth he was induced to examine the nature of the soil at the greatest depth the roots had penetrated, and which he found consisted of gravel. Not being willing to give over the propagation of apple-trees, he caused a pavement of bricks to be made on the bed of gravel, which obliged the roots to take a horizontal direction, and thereby prevented their reaching the gravel, since which they have been free from canker.

(To be Continued.)

FOR THE AMERICAN FARMER.

HYDRAULIC LIFT.

Having observed in the Chronicle of the 8th inst. an article taken from the Massachusetts Spy, in which it is stated, that I have *received a patent for the hydraulic lift*, the use of which is to raise and lower boats from one level of a canal to another; it has become my duty, in reply, to state, that such is by no means the fact; that on the contrary, I never have received any such patent. That my specification was lodged in the department of state, and affirmation then made of my believing myself to be the original inventor, I admit, because at that time, I had abundant reason to believe, that was the true and absolute fact; neither was I aware of any foundation for an opposite sentiment until within a few days past when it was remarked to me by a particular friend of mine, that he had received *some information of its being in operation upon the Ellesmere canal in England, and that it was understood to answer an excellent purpose.*

Chapman's observations on canal navigation, quoted in the above article, I have never seen; but upon examining Vol. 6 of Rees' Cyclopedia, also quoted at the close of the said article, the loan of which I obtained from a particular acquaintance, I there, contrary to my expectations, and very much to my surprise, found an invention described, and said to be in operation upon the canal above mentioned, so very similar in its essential principles, to the one of which I had considered myself the original inventor, that I am now convinced of my not being the first original inventor; and as the most effectual remedy in my power, I am prepared to say, that I have already taken efficient measures to have my specification immediately withdrawn from the patent office, by which means the public will be equally as secure against any injurious effects from it, as if it had never existed.

It is with me a subject of particular regret, that I was not sufficiently aware of the opportunity of referring to such information, prior to the date of my specification, which might then have been prevented; but with conscious honesty and integrity, I *can* and *do*, hereby utterly deny and disclaim *any*, and *every intention whatever*, of ever having either directly or indirectly, conceived the design of taking advantage of any law, for the purpose of appropriating to myself, the sole benefit of the invention in question, without being in fact, as I really believed I was, its true original inventor. Had my plan succeeded and gone into operation, in consequence of its being my discovery, I should have considered myself entitled to receive a moderate compensation for its use, otherwise not.

WM. KENWORTHY.

☞ Those printers who have published my specification, of the *hydraulic lift*, are respectfully requested to insert the above.

"SPONTANEOUS COMBUSTION."

The extensive Cotton Factory, recently burnt at Watertown, was first discovered to be on fire in the upper story, where for a long time, there had been neither lights or fire; which leaves no doubt of a spontaneous combustion, from a quantity of dirt and cotton sweepings, that had been collecting for several months. It being now well known, that many kinds of vegetable substances, especially cotton mixed with oil, grease, or fat, of almost any description, will produce fire, it it is of the highest importance to manufacturers to keep their factories clean of this waste cotton, and every other material tending to produce combustion,—especially at a distance from their principal and most valuable buildings. There have been three recent instances of spontaneous combustion from the wicks of damaged candles, from which the tallow had been pressed; and it behoves those persons interested in manufacturing establishments, to guard against the like misfortunes to their own.

GRASS BONNETS.

The manufacture of hats similar to those brought from Leghorn, has arrived at such perfection in this country, and the young ladies engaged in setting them up are so persevering, that we should not be surprised if we were soon independent of foreign countries for this expensive, and, in some respects, necessary article. We yesterday examined a new hat made by a young lady at Guilford, (Conn.) to be seen at the shop of Mr. Wintringham, No. 125, William-street, which, in our opinion surpasses any thing of the kind exhibited in this city. We understood, a few years ago, that there was an establishment in this city for manufacturing hats of this description, but have not heard any thing respecting it of late. We hope it has not been abandoned, as it is evident, from the prices hitherto obtained for every domestic hat offered for sale, that the public are disposed to encourage this branch of industry. The Agricultural societies should not lose sight of it in awarding their premiums.

Com. Advertiser.

Selections from late numbers of the London Farmers' Journal, received at the Office of the Amerian Farmer.

PLAN FOR THE MANAGEMENT OF AN ARABLE FARM,

WHERE THE SOIL IS CONGENIAL TO TURNIPS AND BARLEY;

Whereby the most extensive Stock of Sheep may be kept, and the largest Quantity of Corn grown, possible—at the same time that the Land is kept in the highest State of Heart and Cultivation.

By JOHN HALL, *Little Marshall, Ide, near Exeter.*

NINE YEARS SUCCESSION OF CROPS.—FOUR HUNDRED ACRES.

FIRST YEAR.							
50 Acres.	50 Acres.	50 Acres.	50 Acres.	50 Acres.	50 Acres.	50 Acres.	50 Acres.
Wheat.		Vetches and Winter Turnips, fed and folded.	Barley.	Barley.	Grasses cut for Hay, ploughed up and dunged.	Grasses fed.	Early Turnips, fed and folded.
SECOND YEAR.							
Barley.	Vetches and Winter Turnips.	Barley.	Grasses mown.	Grasses fed.	Early Turnips.	Wheat.	
THIRD YEAR.							
Grasses, cut for Hay.	Barley.	Grasses fed.	Early Turnips.	Wheat.		Barley.	Vetches and Winter Turnips.
FOURTH YEAR.							
Early Turnips.	Grasses fed.	Wheat.		Barley.	Vetches and Winter Turnips.	Grasses mown.	Barley.
FIFTH YEAR.							
Wheat.		Barley.	Vetches and Winter Turnips.	Grasses mown.	Barley.	Early Turnips.	Grasses fed.
SIXTH YEAR.							
Vetches and Winter Turnips.	Barley.	Grasses mown.	Barley.	Early Turnips.	Grasses fed.	Wheat.	
SEVENTH YEAR.							
Barley.	Grasses, cut for Hay.	Early Turnips.	Grasses fed.	Wheat.		Vetches and Winter Turnips.	Barley.
EIGHTH YEAR.							
Grasses fed.	Early Turnips.	Wheat.		Vetches and Winter Turnips.	Barley.	Barley.	Grasses mown.
NINTH YEAR.							
Wheat.		Vetches and Winter Turnips.	Barley.	Barley.	Grasses mown.	Grasses fed.	Early Turnips.

☞ By the foregoing rotation, each two compartments of 50 acres come to wheat every fourth year, (that is, one fourth of the farm is wheat,) but it avoids the usual recurrence of one other fourth *clover or grasses* after barley, by dividing every field into two, and distributing the management so as to break the four-course shift. The author's own remarks will be added next week, by which it appears, that his barley after wheat is always better than after vetches and winter turnips. The horizontal reading shews the state of the crops each year, and the perpendicular arrangement, shews them as they follow each other in succession.—Edit.

In the open countries, where corn is grown, and large flocks of sheep kept, it may, perhaps, be better to pursue the following Plan, which will be attended with this convenience, that three years out of four the barley fields will lay together (of some consequence certainly, both at seed-time and harvest;) and the feeding-land also rather more contiguous (a circumstance particularly desirable,) as sheep, for reasons quickly apparent to the farmer, should not have far to travel to their fold.

FIVE YEARS SUCCESSION OF CROPS.—FOUR HUNDRED ACRES.

FIRST YEAR.							
50 Acres.	50 Acres.	50 Acres.	50 Acres.	50 Acres.	50 Acres.	50 Acres.	50 Acres.
Wheat.		Winter Turnips, and Vetches, fed and folded.	Barley.	Barley.	Grass, cut, ploughed, and dunged.	Grasses fed.	Early Turnips, fed and folded.
SECOND YEAR.							
Winter Turnips, and Vetches.	Barley.	Barley.	Grasses, cut for Hay.	Grasses fed.	Early Turnips.	Wheat.	
THIRD YEAR.							
Barley.	Grasses, cut for Hay.	Grasses fed.	Early Turnips.	Wheat.		Vetches and Winter Turnips.	Barley.
FOURTH YEAR.							
Grasses fed.	Early Turnips.	Wheat.		Vetches and Winter Turnips.	Barley.	Barley.	Grasses for Hay.
FIFTH YEAR.							
Wheat.		Vetches and Winter Turnips.	Barley.	Barley.	Grasses cut for Hay.	Grasses fed.	Early Turnips.

The peculiar advantages of this system are, that while a large provision is made for sheep, half the farm is sown to corn; and, that, too, by a proper appropriation of the dung made on the farm, and use of the fold, without exhausting the land. As (generally speaking) the best *samples* of barley are grown after wheat stubble, and the largest *quantities* after turnips, an arrangement is here made for sowing half-and-half, with a fit reference to the other succeeding crops. The dung being invariably applied after the exhaustion by the scythe, restores the pabulum of the land on which the grass was mown; and which is brought to a meliorated state by a crop of turnips, fed off early and folded, preparatory for wheat: the wheat always follows the meliorating crops of a one year's lay, and turnips fed off and folded. The cleanness of the land is ensured by each crop of turnips being hoed at least twice, in addition to general good husbandry; and the stout heart of the farm is maintained by the dung and fold, manuring nearly or quite half the land, annually; and, though last, not least, a variety of such extent in the succession of crops is observed (in the first plan as applicable to enclosed countries,) that no crop follows similarly to what it did before, until the ninth year.

It may be just worthy of remark, that 10 to 20 acres of the barley-land may be sown to oats, as provision for the horses of the farm; and 10 or 20 acres of vetches sown instead of turnips, to aid the summer feed of the flock, without alteration of this system.

Mr. Hall having noticed many persons who were farming without a regular system, and, in consequence, not obtaining the full produce their farms were capable of, has been induced thereby, and the approbation of many agricultural friends, to publish this plan; and he begs to add, that having no view beyond the general good of landlord, tenant, and the country, he hopes he shall escape unkind criticism, assuring those who feel inclined to cavil, he will, with pleasure, readily give up his own plan, and unite with the rest of the agricultural world in the approval of any more productive system, whenever it may be brought forward.

WARDROP, ON THE DISEASES OF THE EYE OF THE HORSE.

The author of this excellent little Essay gives a plate, in which the anatomy of the eye is ably displayed. The preliminary remarks are very judicious, and from this division of the subject we extract our present article; adding such remarks on the passages selected as are suggested by the reasoning.

"A taste for pursuits of this kind among medical men might lead to still more important results, as any addition to our knowledge of the diseases of animals must serve to illustrate the diseases of the human body; and the frequent opportunities of dissection and experiment in animals, and the facility in conducting such enquiries, would, if zealously pursued, materially promote such an object. From these researches the agriculturist might also derive some useful hints, to guide in improving the breeds of domestic animals; a subject, which the pursuits of scientific men are likely materially to contribute."

The author here refers to Mr. Cline's excellent paper *on the Form of Animals*, to which we may add the *Treatise on the Rot*, by Dr. Harrison, as instances in which the liberal attention of science has been usefully turned to these rural subjects. The opportunities of dissection in diseased animals, might be especially improved by slaughtering some individuals which are ill of complaints, generally esteemed *incurable*, at at an early stage; in order to trace, if possible, the *origin* of the disease, and to discover in which of the viscera, or organs, the deficiency commences; or, otherwise, whether it be wholly external. This may be exemplified in several of the diseases of Sheep that causes *sudden death*, and in some diseases, very similar, of Cattle and Swine. The *gargel* in Sheep is confounded with the *resp*, *red-water*, and *bloodstriking*; a mortification of the bowels is not distinguished from gangrene by external hurt. Whether the disease called the *braxey* or *sickness*, in Scotland, be the same as the *vanquish*, and in what these differ from the *thotter-ill*, we have no knowledge. Sheep die suddenly (sometimes numerously) at different sorts of keeping, and exhibiting very different appearances after death, yet the disease is called by the same name; or by different names in different places, and no one knows any thing satisfactory about the matter. All this (upon which we could very much enlarge) forms a field for scientific investigation, highly interesting to rural affairs, and might be advantageous to medical knowledge. In the present state of the case, we conceive it would form a fit subject for an honorary reward from the Board of Agriculture, *for the best Essay on the discriminating and peculiar symptoms of the various diseases in Sheep, causing sudden death.* "The diseases of all the organs of the lower animals are not only less numerous (says our author) but they are more uniform in their progress and symptoms, than those of the human body." If this be so, as we think few will presume to deny, the reproach of our present ignorance is so much the greater.—Our author continues thus:—

"The Eye of the Horse is subject to much fewer diseases than that of man, whilst at the same time these diseases do not assume that almost infinite variety of character, which is met with in the human eye, and which is in man, produced from the habits of society, and the various modes of life to which he is exposed.

"The uniformity in the appearances of diseases in the Eye of the Horse, makes the treatment of them the more simple, less of that nice discrimination being required in treating individual cases which is so essentially requisite in the practice of physic.

"Before considering the different diseases to which the Eye of the Horse is subject, it ought to be observed, that not only the progress of the diseases, but their treatment, must vary, according to the different circumstances under which the animal is placed; or as it is in common language called, the 'Condition of the horse.' It may therefore be proper to observe, that there are four different states of condition, in either of which the horse is usually found.

"The *first* is, when he is at grass, or living on green food, exposed to all the vicissitudes of weather.

"The *second*, when his food is more nutritious, and in that state of condition he is usually kept in by the agriculturist.

"The *third*, when he is living on dry food, and kept in a warm stable; as most horses are for the purposes of riding and harness.

"The *fourth*, in the highest possible state of condition when the food is in the least bulk, the body warmly clothed, the horse confined in a hot stable, and exposed to the most violent bodily exertions, for the purposes of the field or turf.

"In these different states of condition, it is reasonable to suppose, that though the same kind of treatment be always applicable to the same disease, yet that treatment must be pursued in a very different degree in animals whose condition is not similar. Thus, if the eye of a race-horse receives a blow, the quantity of blood necessary to be taken away, in order to prevent or allay the subsequent inflammation, ought to be much greater than what would be advisable to take from a horse at grass, who had received a wound of equal severity."

"It is a common observation, that when one eye is attacked with any disease, the other is very apt to become affected with the same complaint. This sympathy observed between the two eyes, has been noticed in all those organs of animals of which there are a pair, and as shall afterwards be observed: a knowledge of this fact leads to important practical conclusions.

"Another question worthy of attention in considering the diseases of the Eye of the Horse, is, to ascertain how far any of these affections are *hereditary*. There is no doubt, but that every race of animals inherits the bad, as well as the good qualities of the parents; and that in breeding, imperfection, and deformity may be as successfully propagated, as perfection and beauty. This has been established beyond all controversy, and it is well known, that in mankind, families are not only subject to particular diseases, but in every race, one or more organs of the bobody are less perfect in structure, and functions, and more liable to disease. Numerous facts may be brought forward to establish the truth of this observation; but is sufficient for the present purpose to remark, how often it happens, that in one family many of its branches are affected either with diseases of the lungs, or brain, or liver, or stomach. Some diseases of the human eye are also known to be hereditary; it is, therefore to be expected, that the Eye of the Horse shall be defective, and more liable to diseases in particular races, or as it is usually denominated, in certain 'Lines of Blood.' Breeders of horses are familiar with this observation, and its coincidence with similar facts in other organs, makes it worthy of attention. It is well known, that some particular lines of blood are subject to spavins; others to curbs; and others to diseases and imperfections in the form of the feet. In corroboration of this opinion, it may here be mentioned, that a mare of the Mercury Blood, belonging to the Royal Stud at Hampton Court, who had lost one eye, had last season a dead foal, which had a single eye; scarcely any vestige of the other being perceptible. Several of the produce of Treasurer, a son of this mare, have been foaled with defective eyes.

"As has already been observed, the diseases of the Horse's Eye are not numerous, and it is here proposed chiefly to consider those causes of blindness which are most frequent, and on which medical treatment has the most powerful influence."

FROM THE CODE OF AGRICULTURE.

"Mr. Wigfull, senior, of Sheffield, recommends, that twenty-four bushels of *the refuse* of kiln-dried oats, (called *shudes* in Yorkshire,) or the same quantity of very dry sawdust, or any other substance that will absorb a large quantity of moisture, (as fine earth in a dryed state,) shall be steeped for some days in putrid urine, and then mixed with eight bushels of soot, or of wood-ashes, and spread on the young turnips, as soon as they appear above ground; which he is convinced, will prove an effectual means of preserving them from the ravagas of the fly.*

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* *This appears to be the method alluded to in our last. It is not stated for how much land*

"An intelligent farmer in the neighbourhood of Edinburgh, (Mr. Johnstone, of Hill-house,) always thins or pricks out his turnips, *as soon as they appear above ground*, as they are certain of being in the *rough leaf* next morning, and consequently out of danger.†

"A very great improvement in the cultivation of turnips, in dry soils, without any mixture of clay in them, is, by applying *a heavy roller* to the turnip drills, instead of the light ones commonly used. The reasons are obvious. The soil being thus compressed, moisture is retained in it, and the gaseous effluvia, arising from the decomposing putrescent mass below, which nourishes the plants when young, not being suffered to escape too rapidly, which is often the case, their growth is promoted, and quickened. The soil, also, being rendered perfectly smooth, the little vermin have no hiding places in which they can shelter themselves.

"Mr. Church, of Hitchill, an eminent farmer in Dumfriesshire, has ascertained, that it is the best mode of securing an early and regular vegetation, to sow the seeds of the turnips *on moist dung*, as soon as it is spread in the drills, and afterwards to cover the dung by the plough, but not quite so deep as usual. This practice is highly useful in dry soils and seasons, and should never be neglected (as the expense of the seed is so trifling,) where there is any risk of losing the crop for want of moisture. In a dry season, when the globe and the Swedish turnips did not vegetate till a month after sowing, and the crops, after all turned out but moderate, the turnips produced by this plan attained a great size, (from 15 to 28 lbs. tops included,) and many of them could not get larger for want of room in the drills.

"But the following is the most effectual method that has hitherto been discovered, to insure the destruction of the fly.

"As soon as the ground is completely prepared for sowing the seed, let a quantity of stubble, straw, furze, dried weeds, heath, wood shavings, or any other sort of cheap inflammable matter, be spread upon the surface, and burnt upon the ground, moving the flame forward, from time to time, and managing it, if possible, so that the smoke shall spread over the field. This is easily done in those dry seasons, when alone the fly is to be dreaded. As soon as that operation is completed, the seed should be instantly sown.—The flame and smoke either kill the insects, or compel them to take shelter, if any crevice can be found in the soil, where they remain until the young turnips are out of danger. The heat also, thus applied, and the ashes thus produced, are of some use to the crop. Nor does it require a great quantity of combustibles to go over the field, merely for the purpose of destroying the vermin, by the heat, the flame, and the smoke. It is probable, (though the quantity has not yet been ascertained,) that from one to two tons of stubble or straw would‡ be sufficient. The security of a crop of turnips would surely be cheaply purchased by such a sacrifice; and if stubble is used, the object can be obtained almost without expense.

"The practice of burning straw and gorse on the surface of the soil, as a means of manuring it for turnips, has long been practised in the Wolds of Lincolnshire. In Dorsetshire, however, it has been employed *for the express purpose of destroying the fly, and with the greatest success.* The articles employed are burnt in the manner above described; and an intelligent friend of mine, who farms in that county, has assured me, that it has succeeded on *alternate* ridges; and that the fly was destroyed where the burning was applied; but that where the burning had been purposely omitted, for the sake of experiment, the crop was ruined.

"It is earnestly hoped that the dilligent farmer will avail himself of these hints, and will derive from them that benefit to which his industry so justly entitles him.

HINTS TO PREVENT THE FLY IN TURNIPS.

"To prevent the ravages of this insect, various modes have been recommended, which may be arranged under the following heads:—1. Destruction of the fly;—2. Rendering the turnip less attractive;—3. Quickening its growth; and, 4. Improving its culture.

"1. To destroy the fly, it has been recommended, to roll the land at midnight, while the dew is on the ground, by means of which these insects may be crushed against the moist earth.* Boards have been smeared with tar, and drawn across the land, for the fly to skip on them, and be caught; and a trap has been invented, by which considerable numbers have been taken;—train-oil, and sulphur, have been used with the seed. Quick-lime has been often suggested; and lime saturated with ammonia in the preparation of gas, has been accurately tried; but all in vain.

"2. To render the turnip less attractive, quick-lime has been used, sown when the dew was strong on the plants. The ground has been brushed with the leaves of the elder tree. Turnips have been sown in the furrow, as well as on the ridge; and radish seed has been used in small quantities, the turnip-fly being particularly fond of the raddish plant.

"3. The growth of the plant is quickened, by the application of a proper quantity of suitable manure, and placing it immediately under the plant. And,

"4. The culture of the plant is improved, by sowing a great quantity of the seed, (about three pounds per acre;) also by carefully weeding the crop, and frequently stirring the soil."

The distinction between *quickening the growth* of the plants, and *improving their culture*, is not very obvious. Our Norfolk correspondent *F.* observes, that with a *fine tilth*, and the land *not very recently manured*, he has rarely suffered any serious injury. This remark is satisfactory for two reasons; first, that in the broadcast way it suggests the benefit of early manuring, that the material may be thoroughly mixed and covered; and second, it explains and justifies the success of the ridge-system, *because by it the manure is certainly covered, though recently applied.*

"It is well known, where attention, has been paid to the means of quickening the growth, and improving the culture of the plant, that the fly is not to be apprehended. The plan of cultivating turnips *in ridges*, as originally practised by Mr. Dawson, of Frogden, in Roxburghshire, and now established with so much success at Holkham, will certainly, in a great measure, prevent the ravages of that destructive insect:—but it is quite a mistake to suppose, that the plan is only calculated for such a soil and climate as that of Holkham, for it had long been previously adopted, not only in Roxburghshire, but in Berwickshire, the Lothians, Northumberland, and other districts in Scotland and England. Still, however, there are *ungenial soils*, as Mr. Rhodes† very properly observes, where it would be desirable to cultivate turnips, and where very strong measures, for the destruction of the fly, would be of the greatest utility. It is, doubtless, a fair field, on which chemistry may exercise its powers; at the same time, if security can be obtained by simple means, it would be more desirable.

"In looking over my notes on this subject, I find that other methods have been resorted to, for protecting the turnip crop, besides those enumerated by Mr. Rhodes.

"Some have recommended taking the seed of the same year, and of a former year, and mixing them together. Then to steep one half of the seed, thus mixed, in water, for twenty-four hours, and then to mix the whole together. By this previous management, the turnips will rise *at four different periods;* and though the fly may destroy some of the plants, there will yet remain a sufficient quantity for a crop, more especially if the quantity of seed used, is at the rate of about three pounds‡ per acre."

CODE OF AGRICULTURE.

In treating of the Diseases of Wheat, Sir John Sinclair quotes an authority in p. 420, in which some experiments are stated to shew which sorts of wheat in common use, are most in danger of this distructive malady. The result is rendered obscure by the fault of the author referred to in the note, or by the customary haste of writing without points, on a subject in which the printers are not able to discriminate. The experiment was made in Torney Fen, in the year 1819, for the purpose of noticing comparative *produce*, quality, disease, and value of varieties; and especially to observe which sort would appear best adapted to the fen-lands; not the outside, but the middle of the field was chosen, and the soil was black mould, a little shallow, and mixed with poor clay. We copy the result verbatim from the code, for the purpose of correcting the errors of the press.

"1. Hungary white, or chitty wheat, short strawed red. These were nearly free from mildew, and were superior in the order in which they are placed.

"2. Square-eared white, velvet white, or egg-shell, were pretty good, but diseased.

"Old red lammas, (awned and smooth,) Sussex thicket hedge-row. These were much worse mildewed; they are all red wheats.

"Talavera-Cape wheat. These were almost good for nothing; not merely with the mildew, but partly owing to the May frost."

The meaning of the above is—1. That the *Hungary white* was the freest from mildew, and the best in quality; next to this was the *Essex white* (or chitty wheat;) third, was the *short-strawed red*.

2. The *square-eared white*, and the *velvet white* (or egg-shell wheat) were pretty good, but diseased.

3. The *old red Lammas* (both varieties.) The *Sussex thicket* and the *hedge-row wheat* (all of them red wheats) were much worse mildewed.

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twenty-four bushels of sawdust, and eight bushels of soot, are to suffice.—Edit.

† *This direction we consider as unfortunate; if the crop could be saved this way, there would be no need of any further inquiry. We grant that stirring the surface, and repeated hoeings, accelerate the growth, and disturb the depredators; but it cannot be that turnips pricked out the day they come up, shall be in the* rough leaf *the next morning.—Edit.*

* *Mr. Vagg's plan of night-rolling, was to kill the* slug, *to which he erroneously attributed the the mischief.*

† *See Farmers' Journal, 28th July,* 1820.

‡ *This word in the Code, is unfortunately printed* bushels.

4. The *Talavera* and *Cape* wheats, were very bad; the latter had no wheat in it.

The foregoing confusion is not at all to be attributed to the Right Honourable Author, whose sagacity and practical knowledge are much superior to such lapses or oversights; but for the sake of those who gather their notions of agriculture principally from reading, and also of those agriculturists who may be unacquainted with some of these sorts, and may wish to try them, we have thought it needful to insert these corrections.

ON PREVENTING THE RAVAGES OF THE TURNIP FLY.

North Creek, Burnham, Norfolk, June 9th, 1821.

Sir,

Many experiments have been tried to prevent the flies from destroying the young Turnips, and I have tried several myself, but have found none so effectual as early horse-hoeing them. Mr. Coke stated at his meeting last year, that by his early horse-hoeing he had saved his from their ravages. I immediately horse-hoed mine, that were then covered with flies, and in a few days, I believe, would have been all destroyed. I recommended a friend of mine to hoe his, that were sown the same time as mine were; he said he thought them too young, he would therefore wait a few days till they were a little larger; he did so, and they were all destroyed, (forty acres:) the ground was then ploughed, and sowed with white Turnips; while my Swedes were saved, I believe, wholly by that means. I now write to state a similar experiment this year. I drilled my swedes on the 12th May last; on the 26th horse-hoed them, on the 29th horse-hoed them again, and this day, the 9th of June, horse hoed them a third and last time: they grew rapidly after the two first hoeings, and will be cross-hoed on Monday next by hand,—fine plants. A neighbour of mine who had sowed his the same time mine were, I advised to hoe them the same time I did mine, with those hoes invented by Mr. Blaikie, as no other kind can be used without covering the Turnips with mould in their young state. He said he could catch the flies on Mr. Paul's plan, and save his: he attempted to do so, by going over the ground many times day after day, and although he caught a great number they beat him at last, and destroyed his Turnips. He has now ploughed the ground, and sown a second time. I lent him my drill, and deposited the same quantity of seed I did; the plants looked as well as mine, and I have no doubt that if he had hoed them, instead of setting his trap to catch the flies, his plants would have been ready to have been cross-hoed as soon as mine. I have just now left my hoes at work, and set down to write this in haste, to catch the post for an early insertion in your Journal, as I hope this information may be useful to the public.

I am, Sir,
Your's respectfully,
THOMAS HEROD.

PREVENTION OF THE TURNIP FLY.

Little Marshall, Ide, near Exeter, Devon, June 15, 1822.

Sir,

The time being so short between this and the period of turnip sowing, I leave more minute investigation to future opportunity, and hasten to inform you, for the general information of your readers, of a circumstance that has just occurred to me. Being about to sow a small plot of two acres and a half of turnips early, that I might have a double chance of escaping the Fly, I determined to steep my seed previous to sowing, having observed several seeds with holes similar to those in the hazel-nut and filbert, made by the *curculio nucum.* I steeped *six pounds* of seed, and found nearly or quite *one pint* swim at the top; this I carefully skimmed off, and on examination found them, many as above described, but by far the major part containing a small grub, which I have very little doubt to be the grub of the Turnip Fly; and which I infer would have been hatched in the ground, had the seeds containing them been sown.

I remain, Sir,
Your's obediently,
JOHN HALL.

☞ The Editor of the Farmers' Journal was some years ago very earnestly employed upon this thought, and made a number of experiments. Like a true projector, he is yet willing to believe there may be something in it, though not a certain remedy.—*Editor.*

REMEDY FOR THE TURNIP FLY.

Bold, near Warrington, June 14, 1821.

Sir,

I observe in your intelligent paper many remedies for destroying the Turnip Fly; and in addition, I beg leave to present to your notice a remedy I have practised at different times when annoyed by these destructive little insects. I have been a turnip grower for these last twenty-five years, and until 1815 to a considerable extent.—My remedy for destroying the Turnip Fly, is to get a quantity of lime from the kilns, in lumps or shells, which I put into a shed, or under cover, and slack it with tobacco water; when it is slacked into a powder, I cause it to be sown carefully upon the young plants. If any farmer will try this simple remedy, his turnip crop may be saved from the destruction of the Fly. Immediately after rain, or while the dew is on the turnips, is the best time for sowing the lime, when it adheres to the leaves of the young plants.

If you consider these hasty remarks worthy of a corner of your valuable paper, it will oblige, Sir, your most obedient humble servant,

JAMES FAIR.

ON THE GRUB WORM.

Isle of Wight, June 1, 1821.

Sir,

Amidst the various observations, queries, &c. relative to the culture and failure of that very uncertain of crops, Turnips, it has struck me as a little strange that none of your numerous correspondents have communicated any observations on those most destructive animals, the Grub Worms. It was my lot last year to have suffered greatly by their depredations, for in one particular field I sowed the seed time after time, but all to no good purpose; and if search were made around a plant which had been bitten at the root, and appeared in a dying state, it was no uncommon thing to discover from one to ten of these creatures, a little under the surface, and ready to play the same game over again, as often as the seedsman would afford them the opportunity; and this was the case more particularly to a pretty large breadth about the middle of the field, extending in the direction of from east to west, whilst the north and south, although in some measure affected, were not in so great a degree as the former. These are enemies not so easily destroyed, or their pernicious effects so effectually guarded against as the fly. Many remedies are said to be capable of saving the crop from the latter, but these under-ground depredators seem almost to set us at defiance, as I have never heard of any sure preservative against the ravages of these noxious reptiles, in any way practicable. Where many rooks resort, they will bore after and destroy some of them; but owing to their numbers, and the manner in which they entrench themselves, the aid and assistance of those birds in this respect can be but of little avail.—Now then good Sir, if you, or any of your intelligent correspondents, can and will have the goodness to point out an effectual method to lessen their numbers in any considerable degree, before the sowing season comes on, it will be an eminent service to the growers and consumers of that almost invaluable plant. It is highly vexatious to see a fine flourishing crop, after having escaped the mischievous consequences of the fly, exhibit the pernicious effects of the grub; but it is one of the miseries of the farmer's life to witness devastations of this kind. The flourishing aspect is soon changed; an enemy has attacked them at the root, and the presage of inevitable destruction is soon, alas too soon, realized. I am a new correspondent, and as I have many facts and observations relative to agricultural affairs, some of an older and others of a later date, in my possession, if they meet your approval, may be induced to address you in future.

Your's very respectfully,
A FARMER.

Unredeemed and Unfunded Debt of England and Ireland for the last ten years:—

1812 . .	£684,743,399	1817 . .	£848,282,477
1813 . .	716,090,573	1818 . .	843,514,767
1814 . .	799,288,436	1819 . .	844,962,321
1815 . .	821,740,214	1820 . .	843,388,804
1816 . .	864,822,540	1821 . .	845,100,931

In 1786 the total debt was about £250,000,000; in 1796 it had risen to £328,000,000; and in 1806 to near £608,000,000.

Tuesday se'nnight a young man was backed for 20 guineas to go sixteen miles in two hours, on a two-mile piece marked out on the Bristol-road, near Gloucester, which he accomplished two minutes and a half within the given time. In consequence of a fall of thick small rain the road became so greasy for the last hour that he ran in his stockings without shoes.

TO THE EDITOR OF THE AMERICAN FARMER.

Sir,

The following information concerns farmers as much as other persons; I therefore send it to you.

It is high time that stage and hack owners should know, that they are responsible for the conduct of those they employ to drive ther carriages.—Scarce a month passes, without the publication of an accident to a passenger, owing to the shameful neglect of the drivers, who are in the constant practice of racing, and of leaving their seats, while the stage is full, and going to a tavern to refresh themselves.

Mr. Dana of Connecticut, and late a member of Congress, will be disabled for life, from fractures of his limbs, occasioned by the horses running away in a stage, and oversetting it, while the driver was thus employed. One or two examples being made, would teach others a useful lesson. The extract is from a late English paper.

Caution to Drivers.—An action was lately brought in the Sheriff's Court at Lancaster, against the proprietors of one of the coaches from Liverpool to Manchester, for carelessly driving the coach on the 21st of May, by which it was overturned near the new bridge, Water Street, in Manchester, and the plaintiff's wife was dreadfully hurt. She was violently bruised, her face was also much lacerated, and will be marked for life; she was confined for six weeks in Manchester before she could be removed to her residence at Liverpool; and she is not yet recovered from the effects of her injuries. She was in a state of pregnancy at the time. As the defendants had permitted judgment to go by default, the only question for the Jury was the amount of damages to be given to the plaintiff: these they fixed at £300, and that sum was awarded to the plaintiff.

A CASE IN POINT.—On the 22d of May, Mr. Charles Coon took his passage in the stage at Albany, to return to his family at Johnstown. As the stage entered Schenectady, it overtook the opposition stage, and the driver undertook to pass the other stage, when one of the hind wheels came off, and the stage was overset, full of passengers, all of whom were more or less injured. Mr. Coon had one finger torn to pieces, and his wrist severely bruised. The amputation of the finger was found necessary: the most violent spasms succeeded in a few days, and continued till the termination of his life on the 7th June. Many more instances of serious accidents are recollected, and others must be familiar to all of us. A few examples being made of stage owners, would lead to caution on their parts.

TO THE EDITOR OF THE AMERICAN FARMER.

July 9, 1822.

DEAR SIR,

Your printer has made of my letter (page 118 of this vol.) arrant nonsense:—instead of "Bark, shells and sea marl," I said, as plainly as possible, that the improvements were effected by bank-shells and sea-ware. The sea-ware is, by corruption, generally called sea-ore, (see Rees' Cyclopedia, where it is also called sea-wreck, sea-tangle, and sea-weed.) Many improvements of the soil have been made in Talbot by *shell-marl*, (decayed cockle shells, &c.) but the shells I alluded to, under the term "bank-shells," are oyster-shells, which are found on the margins of our creeks and Rivers, supposed to have been left by the Indians, and are now nearly decomposed, and make an excellent manure.

Instead of "the *facts* on the *spot*," I am made to say "the *tracts* and the *spot*," there are other trifling errors, which I do not regard; but those I have pointed out are too provoking to one who wishes to preserve the reputation of common sense to pass over in silence, pray correct them.

It has been thought best to publish the above, although the errors complained of were all corrected before many papers had left the press.

Editor American Farmer.

PHILADELPHIA AGRICULTURAL EXHIBITION

The committee on househould manufactures at the late agricultural exhibition near this city, offer the following report, and award and recommend the following premiums:

1. To John Philson for 30 yards of brown linen diaper, with a damask figure, from flax raised in Philadelphia county and water rotted, 10 dollars.

2. Mrs. Rachael Fish, of Philadelphia, for 26 yards of fine linen shirting, $10. [Besides the above, Mrs. Fish exhibited two very fine elegant mixed woollen and cotton counterpanes, the materials spun and dyed in the family; and has also manufactured during the past year 43 yards of carpeting, 100 yards of sheeting, 45 yards of pillow caseing, 14 of bed ticking.]

3. To Dr. Rose, of Montrose, Susquehanna county, for 120 pounds of fine maple sagar, equal to any brown sugar imported, the only sample offered, 8 dollars. [There being no maple sugar made in Philadelphia county, it was resolved, that the premium for it be open to all the state.]

The following articles were also exhibited.—They were not included among those specified for premiums in the printed list, but the committee recommend the annexed rewards.

1. To Archibald Campbell, for 25 yards of linen drilling of excellent quality, of three dozen yarn, 10 dollars. [A. Campbell has also made 600 yards of the same quality drilling, some of which has sold for 35 cents per yard. The flax was spun partly in the public Alms House of Philadelphia, and partly by women hired by the "Female Hospitable Society."]

2. To William Latham for two counterpanes, of mixed woolen and cotton, 10 quarters wide, full size, without seam, 5 dollars.

3. To Mrs. Sarah Sproul for a carpet of patty-pan figure, made of scraps of coloured cloth, chiefly blue and red, and which would probably have been lost if not thus used, 5 dollars.

4. To Mrs. Hannah Johnson, for a very elegant white cotton counterpane, figure worked with the needle, 5 dollars.

5. To Mrs. Parker for a substantial woollen carpet, Turkey pattern, and needle worked, 5 dollars.

Mrs. Jeremiah Warder, Jr. sent a number of handsome fine napkins and table cloths made in her family; these had been some years in use.

Miss Sophia Elliott sent a handsome cotton counterpane.

Miss Sophia D'Autrichy sent a bush containing a number of silk worms forming Cocoons, several pounds of which she last year raised.—The committee regret that this branch of domestic industry is not more attended to by the families of our farmers, and recommend the example of Miss D'Autrichy to their imitation.

Mr. M'Cauly sent specimens of his manufactures.

1 Cotton oil cloth.
2 do. on baize.
3 Linen oil cloths, all very smooth and pliable. The composition of the latter is improved: the article is in use for carriage curtains: it does not require greasing, and does not harden in the sun, and is hence particularly calculated for a southern climate.

Messrs. Rankin and Fowle, sent two very fine specimens of their beaver hats, and Mr. Woolworth several light and neat cotton hats. These articles did not properly come within the notice of the committee, but are mentioned from the satisfaction they gave the members.

RICHARD PETERS,
JAMES MEASE,
NICHOLAS BIDDLE,
REUBEN HAINES,
STEPHEN DUNCAN,
ROBERTS VAUX.

FROM A CORRESPONDENT.

Georgetown, June 27th, 1822.

I observe in your last paper a writer who signs himself *a bit of a jockey*, tells of a race of one mile run by Firetail and Pumpkin, in one minute four and a half seconds: is not this a mistake? the swiftest Quarter races I ever saw run here, was by the famous horse, *Shad;* the other by the Loudoun Sorrel, was twenty six seconds, at the rate of one hundred and four seconds to a mile; and I think no horse in England can run a mile faster than one of our first rate quarter horses can a quarter of a mile—(at the rate I mean.)

Twenty six seconds to a quarter of a mile is 50 feet 10 inches to a second.

One Minute four and a half seconds to a mile, is about 81 feet 9 inches.

Impossible! besides,

4f't. 26i's. $\substack{10'4\frac{1}{2} \\ 104}$ the 0 has been mistaken for a distinction between 1, for minute, and 4½, when it was one hundred and four seconds and an half. I suspect it is an Englishman who is a bit of a jockey.

THE FARMER.

BALTIMORE, FRIDAY, JULY, 19, 1822.

☞ DON CARLOS. The very fine 3 year old ass, Don Carlos exhibited at the last Maryland Cattle Show, and much, and justly admired by all who saw him—is for sale. For terms enquire of the Editor of the American Farmer.

This valuable animal was purchased at Malta by Purser S. Hambleton, who took great pains to procure one of the finest to be had in that country, and he truly merits the compliment bestowed on him by the committee, being uncommonly large and beautiful of his age.

The owner being about to go again to sea, is willing to dispose of him on terms upon which *such an animal* can rarely be had.

The following is the notice taken of Don Carlos:—

The Committee regret that no premium is at their disposal for the very fine Maltese Jack, Don Carlos, imported by S. Hambleton, Esq. of the U. S. Navy; but they recommend him earnestly for a discretionary premium*, and are of opinion that Mr. Hambleton with many officers in that service, are entitled to the thanks of the agricultural community for many public spirited and patriotic acts of this kind, whereby the interests of agriculture must be essentially and permanently promoted,

ROBERT PATTERSON,
CHARLES S. RIDGELY, } Committee.
JOHN HUNTER.

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* *This was bestowed by an unanimous vote of the society.*

◆

☞ TURNIP SEED. Ruta Baga, Purple Top, and White Norfolk turnip seed, which the Editor of the Farmer can confidently recommend—for sale by

W. F. REDDING.

◆

Flour from the wagons, $7—Wharf do. $6 50 to 6 75—White wheat, $1 17 to $1 20—Corn, 70 cts.—Rye, 60 to 65 cts.—Herrings, No. 1, $3 to $3 25—No. 2, do. $2 75 to $3—Shad, No. 1, $7 to $7 25—No. 2, do. $6 to $6 50. No variation in prices of other articles.

MARYLAND TOBACCO.—The fine bright yellow, none in market, much in demand—Good red, $8 to 12—Common do. $5 to $7, and in demand—Inferior, $3 to $5—Dark brown, $2 to $3 50—Seconds, $1 to $5.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, at the North West corner of Market and Belvidere-streets, Baltimore, *where every description of Book and Job printing is executed with neatness and despatch*—Orders from a distance for Binding, with proper directions, promptly attended to.

HORTICULTURE.

POMARIUM BRITANNICUM,

An Historical and Botanical account of Fruits, known in Great Britain, by Henry Philips. —Second Edition.

(Continued from page 131.)

BARBERRY.—BERBERIS;

OR, THE PIPPERIDGE-BUSH.

In Botany, a Genus of the Class Hexandria Monogynia.

The common barberry-bush is a native of this country; and notwithstanding the high state of cultivation this kingdom is now arrived at, it is still to be found growing wild in many parts of the northern counties. Gerard says, in his time (1597) most of the hedges near Colnbrook were nothing else but barberry-bushes.

It is now very properly introduced into our gardens and shrubberies, being both ornamental and useful; but it requires caution in planting, not to have it near the house or principal walks, on account of its offensive smell when in blossom.—The flowers are small, but beautiful; and on their first appearance have a perfume similar to the cowslip, which changes to a putrid and most disagreeable scent, particularly towards the evening and at the decay of the flowers. I have a barberry-tree in my garden near twenty feet in height, the branches of which extend over a circumference of sixty-feet. It has been covered with blossoms this spring, and had a pleasing effect in the shrubbery; but was so offensive for about a fortnight, that no one would walk near it during that time. It seems particularly attractive to singing birds wherever it is planted, especially the bullfinch and the goldfinch, both of which often build in these bushes.

A very singular circumstance has been stated respecting the barberry-shrub,—that corn sown near it, proves abortive, the ears being in general destitute of grain; and that this influence is sometimes extended to a distance of three or four hundred yards across a field. This is a just cause for banishing it from the hedge-rows of our arable fields, for which, otherwise, it's thorny branches would have made a desirable fence.—When this coral-like fruit is ripe, it adds much to the beauty of the garden; but it's acidity is so great, that even the birds refuse to eat it.

I conclude it is the fruit called *appendices* by the ancients. Pliny says, "There is a kind of thorny bush called *appendix*, having red berries hanging from the branches which were called *appendices*:" he adds, "these berries, either raw by themselves, or dried, and boiled in wine, are good to stay the flux of the body." I find, by Gerard's account, that the leaves were formerly used in salad, and to season meat with: he also says, "The green leaves of the barberry-bush stamped, and made into sauce, as that made of sorrel called green sauce, doth cool hot stomachs, and those that are vexed with hot burning agues, and procureth appetite."

Barberries are of an agreeable, cooling, astringent taste, which creates appetite. A conserve is made from this fruit that is refreshing, and strengthens the stomach, and is good against diarrhœas and dysenteries. The juice, or decoction, abates the inflammation of the fauces and tonsils, and heals scorbutic gums.—*Brookes.*

Pickled barberries make a handsome garnish for all white dishes, where acids can be introduced: this fruit is also used for making syrup, lozenges, &c.

The bark of the tree is a good medicine against the jaundice, and all obstructions and foulness of the viscera. The inner bark of this tree, with the assistance of alum dyes a bright yellow: in Poland it is used for colouring of leather.

We have now several varieties of the barberry-shrub cultivated in England, one of which was brought from Candia in 1759, and another from Siberia in 1790; but it possesses no advantage over our native kind of this fruit.

BEECH.—FAGUS.

A Genus of the Castanea, or Chesnut Tree, and of the Class Monœcia Polyandria.

The beech is one of the handsomest of our native forest-trees, which, in stateliness and grandeur of outline, vies with the oak. It seems to have been greatly admired by the ancients.—Pliny says, "There was a little hill called Carne, in the territory of Tusculum, not far from the city of Rome, that was clad and beautified with a grove and tufts of Beech-trees, which were as even and round in the head as if they had been curiously trimmed with garden shears." He adds, "this grove was, in old times, consecrated to Diana, by the common consent of all the inhabitants of Latium, who paid their devotions there." This author mentions one of these beech-trees, of such beauty, that Passienus Crispus, an excellent orator, who was twice consul, and afterwards married the Empress Agrippina, was so much attached to, that he not only reposed under it, but sprinkled it plentifully with wine, and would even embrace it.

Manius Curius, after he had subdued his enemies, protested with an oath, that of all the booty and pillage taken from them, he had reserved nothing for himself but a cruet, or little ewer, made of beech-wood, wherein he might sacrifice to the gods.

The beech, it will be observed, from the class it is ranged under, produces both male and female flowers on the same tree. The fruit succeeds the latter blossoms, which have a one-leafed empalement, cut into four parts, but have no petals: the germen is fixed to the empalement, which afterwards becomes a roundish capsule, armed with soft pines opening in three cells, each containing a triangular nut, called the beech mast. This nut is palatable to the taste, but when eaten in great quantities occasions head-aches and giddiness; nevertheless, when dried and ground into meal, it makes a wholesome bread. This fruit is celebrated for having enabled the inhabitants of Scio, one of the Iönian Islands, to sustain a memorable siege, which they did by the beech masts and acorns that their island afforded.

An oil, equal in flavour to the best olive oil, with the advantage of keeping longer without becoming rancid, may be obtained from the nuts by pressure. It is very common in Picardy and other parts of France, where the masts abound; in Silesia, it is used by the country people instead of butter. The cakes which remain from the pressure are given to fatten swine, oxen, or poultry. A bushel of masts are said to produce a gallon of clean oil, but the beech-tree seldom produces a full crop of masts oftener than once in three years.

A few years ago, an attempt was made to introduce the making of beech-oil in this country, and a patent was granted to the projector; but the difficulty of bringing the country people into any new measure, however beneficial to them, is so great, that it often destroys the best concerted projects. In this instance it was found, that they would rather let the swine consume the masts, than suffer their children to collect them for sale to the patentee, and thus failed the making of salad oil in England.

In the reign of George the First, I find a petition was made for letters patent for making butter from beech-nuts.

The finest beech-trees in England are said to grow in Hampshire. The forest of St. Leonard, near Horsham, in Sussex, abounds with noble beech-trees. The cottagers of this forest inform you, that when St. Leonard wished to rest beneath these trees, he was disturbed during the day by the biting of vipers, and that his repose was broken in the night by the warbling of nightingales, and on that account they were removed by his prayers, since which time tradition says of this forest,—

> The viper has ne'er been known to sting,
> Or the nightingale e'er heard to sing.

The shade of the beech-tree is very injurious to most sorts of plants that grow near it, but is generally believed to be very salubrious to human bodies. The leaves of the beech are collected in the autumn, to fill mattresses instead of flock or straw, as they remain sweet, and continue soft, for many years. To chew beech-leaves is accounted good for the gums and teeth. The Romans used beech-leaves and honey to restore the growth of hair, which had fallen off in sickness.

The timber of these trees, in point of actual use, follows next to the oak and the ash, and is little inferior to the elm for water pipes. Between the years 1790 and 1800, when John Aldredge, Esq. of New Lodge St. Leonard's Forest, was causing fish-ponds to be dug in that neighbourhood, the workmen found scantlings of beech timber, and trunks of these trees, squared out, which were supposed to have been buried in the earth since the time of the Romans, as there is no record mentioning that part of the forest having been either cleared, or ponds made since.—Beech-timber is subject to worms when exposed to the air without paint. It is used by wheelwrights and chairmakers, and also by turners for making domestic wooden ware, such as bowls, shovels, &c. Bedsteads and other furniture are often made with this timber; and no wood split so fine, or holds so well together, as beech, so that boxes, swordsheaths, and a variety of other things, are made from it. When the art of splitting this wood was first known in England, the parties who used it kept the method a profound secret for many years.

BLACKBERRY.—RUBUS;

OR, BRAMBLE BERRY.

A Species of Raspberry.—In Botany, a Genus of the Icosandria Polygnia Class.

The bramble derives it's Latin name, *rubus*, from the redness of the twigs and juice of the fruit. Pliny informs us, "that the propagation of trees by layers, was taught the ancients by the bramble-bush."

> Some bow their vines, which, buried in the plain,
> Their tops, in distant arches, rise again.
>
> *Dryden's Virgil.*

"The berries," says Pliny, "are the food of man, and have a desiccative and astringent virtue, and serve as a most appropriate remedy for the gums and inflammation of the tonsils." The flowers also, as well as the berries of the bramble, were considered by the ancients as remedies against the worst of serpents. They are diuretic, and the juice pressed out of the tendrils, or young shoots, of brambles stamped, and afterwards reduced into the consistency of honey by standing in the sun, is, says the above author, "a singular medicine taken inwardly, or applied outwardly, for all the diseases of the mouth and eyes, as well as for the quinsy," &c. The young shoots, eaten as a salad, will fasten teeth that are loose. The roots of the bramble, boiled in wine, were esteemed one of the best astringents by the

Roman physicians, who preferred the juice of blackberries to that of mulberries for the infirmities of the mouth. Brookes says, "the fruit, when ripe, is cooling, and quenches thirst; and the leaves pounded, and applied to ringworms, and ulcers of the legs, will heal them in a short time." Boerhaave affirms, that the roots taken out of the earth in February or March, and boiled with honey, are an excellent remedy against the dropsy.

The jam made from blackberries is now much used in sore throats caused by colds, and is given in slight fevers.

The juice of blackberry mixed with raisin wine, before it has fermented, will give it both the colour and flavour of claret.

There is a kind of this fruit, called *rubus cæsius*, or dew-berry, but which Gerard calls *rubus saxatilis*, or stone berry; the protuberances of which are much larger, and fewer in number, than those of the common blackberry. It is generally found trailing on the banks of hedge-rows, or in hazel copses, seldom growing above a foot high. This is a berry of excellent flavour, and well deserving a place in cultivated grounds, as it must be equally beneficial to society that our native fruits should be improved, as well as that new varieties should be imported from climates that can give but little hope of their thriving without the aid of artificial heat.

(To be Continued.)

REPORT

To the House of Delegates, by the Committee to whom was referred, the Executive Communicatian relating to the appointment of Commissioners to inspect the Potomac River, with Accompanying Documents; to which is added, Mr. Millard's Resolations on Internal Improvement. December Session, 1821. *Published in the American Farmer, by order of the House of Delegates.*

The Committee to whom was referred the communication of the executive relating to the appointment of commissioners to inspect and examine the Potomac river, beg leave to report: That they have had the same under consideration. From the nature of their commission, they did not feel themselves confined to the subject of the report of said commissioners to the executive, but thought that they were at liberty to examine and report upon all matters of interest, connected with the improvement of that abundant and important river, Potomac. Your committee felt themselves more imperiously commanded to take such view of the subject, by the fact, that two reports thereon, the one originating in the senate, the other in this house, have been laid upon your table since the subject was committed to their consideration, to the justice of either of which reports, your committee cannot assent, but are convinced, that the errors and miscalculation in said reports, have arisen from a want of attention on the part of the authors, to the advantages of this river, fondly hoping, that nothing therein can be imputable to local or sectional feelings and prejudices. Nevertheless, your committee greatly regret, that so far as this river has been the subject of one, if not both of said reports, the authors seem to have been in pursuit of difficulties and impediments to its improvement, rather than the means of making useful, a river so justly the pride of the state, and so anxiously looked to by the founder of our republic, not only as a source of wealth and importance to this state, but as a bond of union between the remotest points of this widely extended empire. In evidence of the difficulties attending the improvement of the Potomac, the committee of the senate have incorporated in their report, an extract from a communication made by Mr. Latrobe to Mr. Gallatin in 1808, as follows: "The trade of this canal, especially during the year 1807, has been so great, that there appears every prospect of its becoming a productive work, in those years in which there is a considerable and equal quantity of water in the river, *but on this circumstance it must always depend.* The information respecting it which can be obtained from the company on the spot, renders it unnecessary for me to say more upon it." Your committee humbly conceive, that no stronger language could have been used in commendation of the improvements of this river then effected, than that used by Mr. Latrobe in the above extract. The committee of the senate, deeming it wise to print in italics a part of said extract, which is not italicised in the original, your committee will pass from it with this single remark, that with great deferance to the opinions of the authors of the report, we apprehend the utility of every canal, will depend upon its being supplied with a sufficient quantity of water, for the transportation of the produce to which its geographical situation entitles it. Your committee have looked in vain, for the doubts of the practicability of improving this river, contained in the above extract, discovered and referred to by the committee of the senate, and insist that all to be inferred therefrom, is favourable to any just plan of improving the river, that the legislature may in its wisdom adopt. If your committee were disposed to view this as a contest between those interested in the improvement of the Potomac, and others equally interested in the improvement of the Susquehannah, they would find no difficulty in extracting from Mr. Latrobe's communication, the suggestion of numerous, real, and almost insuperable obstacles to the improvement of the Susquehannah; yet they hope, those obstacles have been magnified in Mr. Latrobe's report, and recommend to the attention of the state this last mentioned river.

The improvement of the Susquehannah is an object of great importance, and will doubtless contribute to the wealth of the state; but in the opinion of your committee, the greatest advantages resulting from such improvement, must be gathered by a sister state; yet we trust, that no feeling of selfishness will induce this state to delay useful and profitable improvements, because a neighbouring state may participate in their advantages.

The Potomac, in the opinion of your committee, presents at this moment, the point where ought to begin, the first operations of that spirit of improvement, now manifestly awaked in Maryland. It runs through a tract of country equal in soil and fertility to any in the habitable globe, and far surpassing any other, over which the state has jurisdiction or control. It is visited by numerous tributary streams, all of which pass through rich valleys, which promise to pour their wealth into this state when the highway shall be established, through which nature intended it should pass.

We beg leave to present to the view of the house, the various creeks and rivers which contribute to swell the waters of this river, in its course from the Allegany mountains to tide water. It receives on the Maryland shore Will's, Evit's Town, Fifteen mile, Sideling Hill, Tonoloway, Licking, Conococheague, Antietam and Cotoctin creeks, and the river Monocasy; on the Virginia shore, the waters of the South Branch, the Great Cacapehon and Shenandoah rivers, and Patterson's, Little Cacapehon, Sleepy, Bark, Opicon and Goose creeks flow into it. Most of these streams are now navigable in high water, and when the improvements contemplated in the Potomac shall be completed, an irresistible temptation to the improvement of the abovementioned creeks and rivers, will be offered to the states to which they belong.—From Cumberland to tide water, is a distance of 188 miles; and in this distance the river is said to have a fall of 735 feet. The Potomac passing from the west towards the east, through the mountains and ridges running from North to South, must necessarily become a rapid and rough stream, but its rapidity and the magnitude of its fall, so far from defeating, would minister to the purposes of an independent canal, cut by its side, from Cumberland to tide water.

That such a canal is not only practicable, but easily accomplished, your committee cannot conceive it necessary to report to an enlightened assembly, understanding the situation and interests of the state. The banks of the Potomac are in a great degree composed of alluvial land, and easily excavated. This circumstance of itself will greatly diminish the expenditure usually contemplated for works of this character and magnitude, but without this, canals are now constructed at one half of the expense heretofore supposed necessary; and the opening of a canal must at this day be attended with unusual difficulty, if it cost more than a turnpike road. Your committee have consulted the best advisers, and availed themselves of the best means of information, by which they could most accurately ascertain the probable cost of the proposed work, and they are convinced that a canal may be made from Cumberland to tide water, with two paths for the working of the boats by horses, for the sum of one million five hundred thousand dollars, including all works necessary to the complete formation of the canal.—In the discharge of the duties assigned to your committee, they wrote to John Mason, Esq. President of the Potomac company, requiring information upon certain subjects enumerated in said letter, and submitted to him the plan of improvement of the river, proposed by your committee. That document marked (A,) accompanying this report, will present to the House of Delegates a full view of said plan.—The above communication was promptly replied to by the President of the company, in an able and elaborate paper, suggesting some improvemants in the plan of your committee, and developing the condition of the company's funds and works. That paper, with others referred to in it, your committee beg leave to attach to this report, and have marked it (B.)

These documents, shewing the situation and wishes of the company, so far as they could be ascertained, have contributed to fasten the convictions of the committee, that this great work, needs only to be undertaken and seriously pursued by the general government, or the states of Maryland and Virginia, to give to this state and the nation, the full enjoyment of all the blessings the improvement of the Potomac is calculated to secure. With this view of the subject, your committee submit the following resolutions:

Resolved by the General Assembly of Maryland, That the improvement of the Potomac river, is an object of the first importance and interest to the people of this state particularly, and to the nation generally.

Resolved, That the state of Maryland will unite with the general government, in any just plan that may be proposed for the improvement, of said river. And if for that purpose, it will incorporate a company, the state pledges itself to become a member thereof, and to secure the operation of such company within the territory of this state.

Resolved, That a copy of this report and resolutions be sent to our Senators and Representatives in congress.

All which is respectfully submitted.

B. S. FORREST, *Chairman.*

ACCOMPANYING DOCUMENTS.

A

Letter from the Committee, to John Mason, Esq. President of the Potomac Company.

ANNAPOLIS, January 30, 1822.

DEAR SIR,

The committee appointed by the House of Delegates, on the subject of the improvement of the navigation of the Potomac river, are desirous of obtaining from you as President of the Potomac company, information on the following points.

1. A statement of the amount of tolls received by the Potomac company, from 1st of August 1817, to the 1st of August 1821, together, with the number of boats and tonnage employed, and the produce and merchandise transported, with the estimated value of the same during that period, exhibiting the amount in each year; and from the 1st day of August, 1821, to the 1st of January, 1822.

2. The number of the shares of the capital or dividing stock, and the amount.

3. The number of the shares and amount held by the states of Maryland and Virginia, and by individuals respectively.

4. The whole sum expended on the works from the commencement of the operations of the company, up to the 1st of January, 1822.

5. What may be considered the annual average amount of the tolls in the present state of the works?

6. The amount of the debts due from the company on the first day of January, 1822, shewing to whom due, principal and interest.

7. Whether the stockholders in the Potomac Company would desire an incorporation into a new company, to be formed on a basis calculated to insure complete success to the improvement of the navigation of the Potomac river, and in which their rights should be preserved.

8. Whether the creditors of the Potomac company, in your opinion, would take stock in a new company, to the amount of their claims, as payment of the same.

The committee would respectfully submit to your consideration, a rough outline of a plan which has been proposed to the committee, as one which would be effectual to obtain the contemplated object. As delay has, and must frequently occur, in the passage of joint acts by the legislatures of the states of Maryland and Virginia, it is proposed that Congress shall be the legislative head of the contemplated company. This appears peculiarly proper, as that body holds its sessions in the midst of the District of Columbia, which district is very vitally interested in the improvement of the navigation of that river, and in which the officers of the company must, of necessity, reside. All applications for legislative enactments concerning the company, can there be easily made, and promptly obtained. The states of Maryland and Virginia, can, by one act, confer the privilege on this company of carrying on their operations in their respective territories. It is also proposed, that this company shall have a capital of two millions of dollars, in twenty thousand shares of $100 each, which shall be subscribed as follows, viz:

The United States,	Shares	
The State of Maryland,	do	
The State of Virginia,	do	
The stock-holders in the Potomac company, to the amount of their stock,	do	
Creditors of the Potomac Company, to the amount of their claims, -	do	
New subscribers the balance,	do	
	Shares, 20,000	$2,000,000

The subscriptions to be paid as follows, viz: $5 on each share at the time of subscribing—$5 on each share one year thereafter, and $10 on each share annually thereafter. By this plan, the whole of the money will be paid in ten years. The United States to guarantee an interest of five per centum per annum on the payments as they are made, until the last payment is made, and then on the whole for the term of ten years. The tolls which may be from time to time received on the works already made, and on those which may be constructed during that period, to be applied to the payment of the interest. It is proposed to fill the blank in the subscription on the part of the United States, with *five hundred thousand dollars*, and the blanks opposite the states of Maryland and Virginia, each with *two hunared and fifty thousand dollars*, including their stock in the present Company, and including also the debts which may be due from said company to the said states.

Your opinion on the proposed plan, together with any information exclusive of such as is asked for as you may deem of consequence to aid the deliberations of the committee, is earnestly solicited, at as early a day as your convenience will possibly admit.

With assurances of respect, the committee are sir, yours, &c.

B. S. FORREST, Chairman.

JOHN MASON, Esq.

B

Office of the Potomac Company,
George-Town, D. C. Feb. 5, 1822.

SIR,

I duly received the letter you addressed me on the 30th ult. requiring information in relation to the affairs of the Potomac company; with which request, so far as depends on me, I comply with great pleasure.

Answers to the first six queries put by you, will be found in the enclosed papers as noted at foot.

To the 7th I reply that judging of the sentiments of the stockholders collected of late years, as well in official, as individual intercourse with such as reside in this part of the country, I have no doubt but they would most cheerfully unite with and make part of a new company to be founded "on a basis calculated to ensure complete success to the improvement of the navigation of the Potomac river, and in which their rights should be preserved."

To the 8th: The creditors of the company generally, I apprehend, could not be induced to take "stock in a new company to the amount of their claims, for payment of the same." Most of the debt has been incurred, with the banks in the district, which being much reduced in their business, could not, I presume, lay out of their money, or at least of the interest on it—such too is pretty certainly the case with individuals.

If an interest on subscriptions is guaranteed by Congress until the profits of the works replace it by dividends from the tolls, at the rate proposed; then I think a subscription both of creditors and other individuals might be expected; but perhaps it would simplify the plan, and make the procuring the money cheaper, if congress would issue a stock, for say, *one million seven hundred thousand dollars*, bearing interest at 4 per cent, at which the money might be had, if not here, in Europe, irredeemable in any part for twenty years, and then to be sunk by payments of dividends of six per cent. per annum, including interest, and taking the guarantee of the states of Maryland and Virginia, to furnish annually to the public treasury, their quota, to say, for the stock that each might agree to take; let the present stock holders subscribe say the states and individuals, in their respective capacities, at par, giving up the interest to the amount of the now capital stock, i. e. $311,555 55, their having paid the debts, there would be left something more than one million and an half to operate on, in the new project, thus:

Old Capital	$311,555
New Capital	1,700,000
United Capital	$2,011,555
Money raised from new capital as above - - -	1,700,000
Payment of debt, off, say	175,000
Remaining to be expended	$1,525,000

Which it is believed would make an independent canal with the requisite locks and towing paths from Fort Cumberland to tidewater. I am induced to believe that the stockholders would agree to subscribe their stock at the original par value, say £100 sterling per share, and give up the 30 per cent advance paid on $\frac{23}{73}$ of it, to wit: on the subscriptions of 1796 and 1798 subscribed and paid as shewn in paper marked (B,) at £130 in lieu of £100 (the price of the first shares subscribed;) and moreover, to sink the interest on the money which they have laid out of from 25 to 35 years, and on account of which the sum of upwards of 200,000 dollars, as is shewn by the table (A) has actually been in hand and been re-expended in the work. A greater sacrifice than this could not be asked of those who have borne the brunt of the battle; who have been contending with difficulties, and have advanced their money for about thirty years; and who have, as will be shewn by the first and last columns in paper (A) served the interests of the community by cheapening and facilitating the carriage of about a half a million's worth of produce per annum, for the last twenty years.

Thus, sir, I have used the permission you have given me, so far as to suggest some alterations in your plan, the outlines of which, appear to me to be well calculated to answer the end proposed; and I would take the liberty of adding, that if the course I have intimated is taken, the states coming in as present stock-holders, to subscribe in the first instance, would leave them to participate with the United States in the new stock on a different footing; and if the creditors of the company and individuals are not looked to, it will be to the three political bodies to take the whole of the new stock, in such terms as may be found right.

A plan not very dissimilar to your's is also now maturing in a committee of Congress, so that I have great hopes that good will grow out of these various evidences of the interest taken in the navigation of the Potomac.

With very great respect,
I am sir,
Your most ob't serv't,
J. MASON.

Renjamin S. Forrest, Esq.
Chairman of Committee of the House of Delegates of the Legislature of Maryland.

[☞ *See Table* (A) *at the end of the documents, which belongs here.*]

B

The table marked (A) constitutes an answer *to the* 1st *query, and the 5th*, by giving a view of all the tolls, tonage and produce, from the commencement to the 1st of August, 1821.

Answer to the 2d Query.

The capital or dividing stock is made up of 701 shares at £100 sterling $444 44—$311,555 55

Answer to the 3d Query.

The State of Maryland holds	220
The State of Virginia holds	120
Of which 70 were presented to General Washington,	
Individuals hold,	361
Shares.	701

Note. The original number of shares subscribed were 730—29 of which were forfeited and merged in the remaining 701.

The original subcription in 1784, was for 500 shares at £100 sterling each; a second subscription was made in 1796 for 100 shares *a* £130 sterling each, and a third subscription was made in 1798, for 100, shares *a* £130 sterling each.

Answer to the 4th Query.

The whole sum expended on the works, in contingent expenses, and interest on the debt stated on 1st August, 1821, at $700,000 nearly, (see paper C.) was supplied by the capital stock, by monies arising from tolls, loans, from interest received, and from forfeited shares.

Answer to the 6th Query.

The amount of the debts due from the company on 1st of August, 1821, the last period its accounts have been made up for principal and interest, was stated at $174,390.

C.

List of debts due by the Potomac company, to 1st August 1821.

To the Banks of the	
District of Columbia	$102,578 22
State of Maryland	38,250
Cumberland Loan	7,904 31¼
Antietam Loan	16,372 86
Shenandoah Loan	4,508 89
Monocasy Loan	3,775 84
Sundry Individuals	1,000
	$174,390 42¼

J. MOORE, Jr. Treasurer.

A.

TABLE shewing the amount of Tolls received by the Potomac Company in each year, from the first of August 1799, to the first of August 1821, together with the number of boats, and the tonnage employed, and the produce and merchandize transported, with the estimated value of the same, during that period.

Years	Boats	Tonnage.	Barrels of Flour.	Barrels of Whiskey.	Hhds. Tobacco.	Tons Iron.	Other articles of produce estimated.	Sundry return goods estimated.	Amount of tolls received.	Total estimated value.
1800	296	1643	16584	84	25	.0	$2,950 00	$7,851 58	$2,138 00	$129,414 00
1	413	2993	28219	619½	100	187½	14,060 00	6,180 00	4,210 19	328,445 32
2	305	1952	17250	379	5	238½	27,232 50		3,479 69	163,916 00
3	493	5549	45055	257	32	480½	3,936 00	10,386 00	9,353 93	345,472 82
4	426	3823	39350	578	8	88	3,250 00	7,514 00	7,765 58	284,040 60
5	405	3208	28507	436	11	137	32,975 18	7,486 00	5,913 24	340,334 18
6	203	1226	19097	459	5	20½	3,553 40	4,998 00	2,123 69	86,790 40
7	573	8155	85248	971	20	35	11,796 00	7,314 00	15,080 42	551,896 47
8	508	5994	48463	1535	3	13	10,532 37	7,613 00	9,924 27	337,007 47
9	603	6767	40039	1527	37	494	8,537 00	11,510 00	9,094 89	305,628 00
10	568	5374	40757	1080	13	191½	5,703 00		7,915 89	318,237 62
11	1300	16350	118222	3768	27	200	6,810 00	6,000 00	22,542 89	925,074 80
12	613	9214	55829	3143	6	360	1,694 00	7,319 75	11,471 37	515,525 75
13	623	7916	55902	3464	11	252	1,899 00	6,119 32	11,816 22	423,350 32
14	596	5987	38769	2684	18	361	675 60	5,314 12	9,109 82	312,093 72
15	613	6354	47183	4616	9	314	2,075 00	5,211 15	9,789 57	489,498 15
16	550	6132	35918	1774	29	419	9,291 65	6,371 35	7,501 52	357,661 00
17	856	8197	57662	1385	10	335	4,094 00	14,000 00	13,948 23	787,994 00
18	746	9778	58226	3126½	2	428¾	8,750 00	15,124 00	10,332 26	681,924 75
19	775	7550	66542½	1479	0	278⅓	9,988 00	15,521 00	12,514 04	565,010 62½
20	917	16506	75272	1215	14	227½	16,587 95	12,230 00	13,107 31½	420,818 15
21	760	11400	67557	1391	10	115	11,515 00	10,027 00	12,490 61	318,810 00
	13142	151068	1085623½	35966	395	5176¼	$197,906 75	$174,088 69	$210,824 17½	$8,987,934 14½

J. MOORE, Jr.
Treasurer to Potomac Company.

Mr. MILLARD'S RESOLUTIONS.

House of Delegates, *Feb.* 23, 1822.

As the representatives of the people of Maryland, we should hold ourselves guilty of a censurable indifference to their direct interests, and to our duty as the constitutional organs of their will, as respects their zeal and good dispositions towards the whole federal family, were we to presume silence at this interesting period, when the subject of internal improvements engages the attention of congress, and of some of the neighboring states. As important branches of this system, we perceive with peculiar pleasure, that the project of opening the navigation of the Potomac, so as to connect it by a short portage with the great streams of the west, has been urged on the representative wisdom of the nation by the memorial of a respectable portion of our state, whilst that of uniting the waters of the Delaware and Chesapeak by a canal, will probably be enforced upon the attention of the same body by the respectable recommendation of the legislature of our adjoining state. In this great chain of internal communication, so necessary to our federal prosperity, and which was an object of such high interest and ardent hope with the great founders of our republic, Maryland forms too distinguished a link to be overlooked. The superior natural advantages which she possesses, eminently fits her to be the centre of union between North and South, and East and West, by the agency of internal improvements. A canal of no great extent would connect the waters of the Delaware and Chesapeake, and thus afford a direct, cheap and safe transportation from north to south. The opening of the navigation of the Potomac would bring the western and atlantic states in close neighborhood. That these improvements should be made by the national and not by the state governments, we can entertain no doubt when we look at the scale of comparative benefits. The question of constitutional power we consider as put to rest by the judgment of the supreme judicature of the land; for the reasoning employed to establish the decision in the case of the United States Bank, applies with great force to this point. To recur then to our first position, that it is the duty of the general government to effect these works, we have only to enquire what are the advantages which they would produce to the states, individually, compared with the benefits to them in their collective or federal character. To the states in their separate or independent character, these improvements would produce one great result, an augmentation of capital, by enhancing the productiveness of labor. And this is the chief, if not the only important benefit that it would secure to them as distinct sovereignties; but this gain would likewise prove the gain of the general government, and that too, in an increased ratio. For as the capitals of the states would be improved by the improvement of the fortunes of its citizens—so the capital of the general government, or in other words its resources would be augmented in proportion to the augmentation of state capitals. There are, however, other, and great considerations which enforce upon congress the duty of accomplishing these works. To promote the public welfare, it is the part of a wise government to adopt every means of drawing close the bonds of our Union. We think this cannot better be done, than by creating objects in which all have a great interest; and by strengthening our mutual dependence upon each other by affording facilities for exchange of products, and reciprocation of other benefits. We should thus lead the whole force of private interest, and convenience, to the abstract political truth, that in Union is prosperity. An extended inland commercial intercourse would further, (by removing the prejudices of local education) clothe our political connexion with all the attractions of domestic affections, and convert the cold union of political convenience into the warm hearted alliance of social sympathy and friendly sentiment.

It would be found a necessary and valuable auxiliary towards providing for the public defence—a duty allotted to the general government.—It would enable the government during a state of war, to make a more prompt application of its means for internal defence, by creating facilities for transportation, with comparatively little cost, cannon and other munitions of war, from one point to another, as the public exigencies might demand. Emergencies might, indeed, occur, during war, where the necessary aid could not otherwise be furnished. These are advantages especially resulting to the federal government, and grow naturally out of the execution of the trusts reposed in it by the federal constitution.—Hence we are led to conclude that as the great and prominent advantages of such a system are of a general and not local operation only, the provision for its execution should be made, not by the local authorities, but by that government whose province it is, to superintend the general relations and concern of the Union. Without the aid of the general government, the great federal object, promising such beneficial results to the country, will be unaccomplished either from want of means on the part of such state governments as might attempt it, or from discrepancy of views where the concurrence of two or more states is necessary. When we view the direct bearings of such a system of Internal Improvements, as shall open a safe and cheap inland communication with all the great sections of our extensive country upon so many and great objects of political economy, we are at a loss to conceive any proposition which can combine in its favor more considerations of national dignity, political prudence or practical utility.—To express the views of our constituents upon this important subject, Therefore,

Be it resolved by the General Assembly of Maryland, That our Senators and Representatives in Congress, be requested to use their best exertions to procure from Congress the establishment of adequate permanent funds, for completing a national system of internal improvements.

Be it further resolved, That our Senators and Representatives, as aforesaid, be requested to direct the attention of Congress, to the expediency of immediately providing for the opening of the navigation of the Potomac river, from tide water to Cumberland in Allegany, and of connecting by a canal, the waters of the Delaware and Chesapeake.

Be it further resolved, That the governor be requested to transmit a copy of the aforesaid preamble and resolutions to each Senator and Representative in Congress, as soon as may be consistent with his convenience.

MR. MILLARD.
Read Feb. 23, 1822.

Selections from late numbers of the London Farmers' Journal, received at the Office of the American Farmer.

BOARD OF AGRICULTURE,

32, *Sackville-street*, 24*th May*, 1821.

President:

THE RIGHT HON. THE EARL OF MACCLESFIELD.

Vice-Presidents:

The Rev. Geo. Jenyns, John Fane, Esq. M. P., Davies Gilbert, Esq. M. P., Chas. Duncombe, Esq. M. P.

The government having signified their intention no longer to continue the usual grant for the support of this Board, it was proposed to provide, if possible, for the maintenance of the Board under its existing charter, on a reduced establishment, by donations, and by annual subscriptions of two guineas each, from every ordinary and honorary member of the institution; and a circular letter, signed by the President, was sent to every such member of the Board, requesting to be informed, whether or not he would subscribe that sum annually for the above purpose; and adding, that a donation of twenty guineas would be received as a subscription for life. Since which, so many donations and annual subscriptions from such members have been received, as to place the existence of the Board, on a reduced establishment, beyond all hazard.

And it having been represented to the Board, that if subscriptions were admitted and received from the public at large, for the support of this most important of all national institutions, viz: *The encouragement and improvement of our Agriculture*, this Board, so far from seeking to exist on a reduced establishment, might, on the contrary, enlarge its sphere, and extend its influence to every corner of the United Kingdom:

It is therefore unanimously resolved, That this Board will admit all such persons throughout the United Kingdom, to become honorary members of the BOARD OF AGRICULTURE, as shall produce to the Secretary a certificate of any two members of the Board, that such intended subscriber is a fit person to be received as an honorary member of this Board, and who shall thereupon pay to the Treasurers, Messrs. Smith, Payne and Smiths, Bankers in London, or to the Secretary, the sum of twenty guineas, as a subscriber for life, or the sum of two guineas in advance, as an annual subscription for the current year, and yearly and every year shall continue to pay such annual subscription for every current year; and who shall afterwards be considered to be annual subscribers until notice of discontinuance shall be given to the Secretary, And it is ordered, that the Secretary do publish these proposals, and terms of admission as honorary members of the Board of Agriculture, in the Courier, The Farmer's Journal, and the County Chronicle; and that he do make the same known, by correspondence with such country gentlemen as he may be acquainted with in every county in the kingdom; and state, that for such subscriptions the subscribers will be severally entitled, not only to a copy of all the communications of the Board, which may be hereafter published, but also to attend all such lectures as may be hereafter established and read at this Board; and above all, that this Board hopes, that by a large and extended subscription throughout the United Kingdom, to continue not only the annual Cattle Show in London, which they had just commenced, but also their annual premium to the occupier of the best cultivated farm, which they mean to offer to every county in the United Kingdom, in which at least twenty subscribers to this Board shall reside.

That these important objects, together with securing and connecting a general centre of communication, and diffusion of knowledge upon all agricultural improvements, and breeds of cattle and sheep, cannot fail, in the opinion of this Board, to attract the attention, and receive the support of every man who traces the real prosperity of every state to its true source, viz: *The extension and improvement of its agriculture.*

Signed by order of the Board,

GEO. WEBB HALL,
Secretary.

SIR JOHN SINCLAIR *on the Destruction of the Fly in Turnips, by Flame and Smoke.*

George street, Edinburgh, June 2, 1821.

SIR,

I have just received a letter from a friend, in which there is the following paragraph:—

"About two days before I received your letter, I had some conversation with Mr. Thomas Green, of East Tibberton, in the county of Salop, one of Lord Stafford's most improving and considerable tenants, and one of the best farmers in the island; in the course of which he stated to me, that the Fly, last year, was as destructive to him as it was in so many other parts of England. He tried every means of destroying it, such as sowing the seed with sulphur, and with salt; also rolling in the night time, &c. &c. but all without success. Having seen your Paper respecting the effects of burning stubble, he tried the experiment on a small scale, which was attended *with so much success* that he is determined to try it more extensively this year, should the ravages of the Fly render it necessary."

I hope that this piece of information will induce many other farmers to try the experiment on an extensive scale, and that they will communicate the result to the public, whether favourable or otherwise, through the medium of your Paper.

I remain, Sir,
Your very obedient serv't,
JOHN SINCLAIR.

ON THE TURNIP FLY.

Banks of the Tay, May 26, 1821.

SIR,

It is now about nine years since a communication was read to the Caledonian Horticultural

Society, Edinburgh, on preventing the depredations of the Turnip Fly. This communication was published in the first volume of the Society's Memoirs, page 452. Quick lime is there recommended to be sown on the seminal leaves, and the experiment has been frequently tried since that period, and attended with complete success. It must be observed, however, that it is not the proper time to sow the lime "in a dewy morning;" the leaves should be dusted over when they are *completely dry*, otherwise the effect will appear as you have described in your judicious remarks on that subject, contained in your valuable Journal of Monday last. To say nothing of the pernicious effect resulting from hot lime being applied to the *wet* surface of young leaves, already partially punctured by the fly, the crust that would be immediately formed would totally prevent any thing like perspiration from the upper part of the leaves, and though that crust might be quite impenetrable by insects, the minute punctures made in the leaves before the application of the lime would extend in proportion to their growth; hence the yellow, sickly, and ragged appearance of the foliage, when the crust is removed. By the application of lime in *dry weather*, none of these effects are produced, and the fly, as far as I have observed, has never been seen to touch a plant while the dust remained on the surface of its leaves. I may be permitted to state, that last season the fly attacked a field of turnips, and before they were observed, had almost finished their work. A neighbour, whose turnips in an adjacent field were in the same state, had commenced ploughing down for a second sowing; but, as the season was far advanced, (4th July,) and as, by splitting out the drills, I must have lost the use of the dung contained in their centre, for that season, besides the loss by exposing it to the action of the weather, and time not permitting to give a cross furrow, I instantly set some women and boys to work, with gloves on their hands, to dust over every plant that had any part of its seminal leaves remaining. The weather continued dry for about a week, so that I did not need to repeat the operation, which I certainly would have done, had the dust been washed off by rains before the plants were out of danger. By the end of two weeks I had the satisfaction to see every plant that had been on the verge of destruction, show vigorous foliage, which ultimately produced a heavy crop, while my neighbour's second sowing shared almost the fate of his first, and what few plants escaped the fly were so late as to produce nothing but foliage. A Winchester bushel of newly slacked lime dusted an acre, and the expense of sowing amounted only to ten pence; but it must be observed, that the plants were sown in drills, about two feet apart. In this country turnips are never sown *broadcast;* where that is the case, more lime may be necessary. You will no doubt rank me amongst those who make "large claims on public expectation," and I am willing to subject myself to any censure that you, or the public, may be pleased to inflict, on condition that the method I recommend will be first fairly submitted to the test of experiment, when the sun is near the meredian, or when the "morning dew" has passed away." I shall only add, that I have found soot quite ineffectual: it rather attracts than repels, the mischievous marauders. As you are already acquainted with my address, I shall here subscribe myself,

Sir, your obedient serv't.

G.

☞ We do not rank our correspondent with the new inventors of improved schemes (whose pursuits, however, are meritorious, although their promises are often too sanguine,) because he is not the author of this plan. The above statement deserves further confirmation by experiment, for it is certainly more within the compass of probability and effect that *ridged* turnips should thus be preserved, than those sown broadcast. The *punctured leaves* we alluded to, were the second pair (or *rough leaves,)* for the flies eat the semial leaves by the edges: the lime used in our experiment was *not fresh Slaked.*—Edit.

DOCTORING SEEDS.

We stated last week, that seeds had been *manufactured* for mixing, but it proves to be an *error in the Bill.* The clause is worded so that it conveys this sense; and as it is not doubted but that whole pepper, &c. are made and manufactured to mix with the vegetable berries, so this might be the easier of belief. We have now the minutes of the evidence before us, and it turns out that the seeds for mixing are old and spoiled seeds, bleached and coloured as the intention requires, to mix with seeds of middling quality, to improve the colour, and to sell the old and doctored seed, and make *it* sell the other. The evidence shews that the seeds to be bleached are shot on a floor, and damped; then laid on a kiln, on hair cloth, and fumigated with sulphur-vapour; the red clover is put into a sack, and chaffed between two men, being first wetted with a liquid of deep purple colour. The evidences on the part of the seed-doctors do all in their power to prove that not much heat is applied, or wanted, and that the seeds may grow, notwithstanding the process. Our readers know that the purple bloom on red clover seed, and the clear pale yellow of the other, are the natural signs of *ripeness* and good quality; therefore, if these are imitated in old and damaged, or inferior seed, the purchasers are imposed on, and the sellers of good seed are injured. The only chance a farmer has in sowing inferior seed, is to purchase a great deal for a little price, and sow it the thicker; but here is a bad seed made to look like good, although (at best) not more than one fourth, or perhaps not one tenth, of it will grow.

We have received a letter, which we consider as somewhat extraordinary, from Mr. Joshua Wigfull, sen. dated Sheffield, 13th inst., in which he states that *urine*, mixed up with absorbent matter, (such as sawdust,) and *two other ingredients*, may be had *gratis* by application to him, to be sown at the rate of ten or twelve bushels to the acre, to prevent the ravages of the turnip fly: if it answer the purpose, it is to be made public, &c. As this is not, at present, likely to be tried out of his own neighbourhood, we may wait the result before we say any thing more about it.

The Helmsley Agricultural Meeting, will take place on Thursday, the 5th of July.

From the Statesman.

ON THE WOAD PLANT AND WOAD VAT.

"The isatis tinctoria, or woad plant, has been used for nearly two thousand years, in dyeing of blue, and was the only material from which the Europeans obtained that colour, before the discovery of South America, from whence indigo was first obtained.

"The French, during the late war, being deprived of their usual supply of indigo from the eastern and western continents, caused the isatis to be cultivated for the purpose of obtaining indigo from it, and succeeded in the attempt. This plant is still used as the basis of the blue vat, for dying of woolen, because the materia tinctoria has never furnished any material that can be admitted as a substitute. It is a plant, which combined with indigo, gives the best and most permanent blue dye hitherto discovered."

The woad plant requires a deep, rich, loamy soil, and its value when manufactured, is always in proportion to the quality of the land on which it has been raised: that which has been grown on weak poor land, is of no more value than so much bran and madder; that which comes from land of middling quality may be used occasionally to vamp with, but when used altogether by itself the colours will be weak in body, nor will they stand the usual test of acids and exposure to the atmosphere. Woad that has been raised on good land, gathered in proper season, and skilfully attended during the manufacturing afterwards, will, in the hands of a good workman, make colours highly beautiful and very permanent; but its property, as might be expected from the contingencies to which it is subject is very valuable, and from hence arises all the difficulties which the dyer has to encounter, and the consequent disappointment experienced by the manufacturers of this country in the skill of European woad dyers.

To obtain a prime article of this kind, invariably the same in strength and quality, must be therefore, a grand desideratum with our dyers and manufacturers. To effect this objects, I have lately imported a small quantity of woad, now for sale at Messrs. Divie Bethone & Co. which is the best that the west of England affords, and if encouraged, I shall continue to supply the market at a reasonable price, until I can find some respectable landholder in the vicinity of New-York, who has ground of the quality wanting, and sufficient enterprise to undertake the raising and manufacturing of it in a regular and permanent way.

The woad vat is compounded of woad, indigo, vegetable ferments, and of a caustic or sub-carbonated alkali: the woad acts both as a colouring and fermentative matter. There is a difficulty in attending the use of this material, arising from its liability to run into the putrefactive fermentation; whenever this happens, the vat is inevitably lost, and it requires considerable practical skill to prevent it. The vegetable ferments are usually bran and madder, but the materials which may be used are very numerous, and every ignorant workman considers that he is in possession of an important secret, when he has substituted some other ferment instead of those. I have known weld, malt, malt-dust, beer-grounds, yeast, distiller's swill, and many others applied, and as all of them are vegetable ferments, they must produce a like effect when used with judgment. The indigo is ground to a paste, and put into the vat together with the woad, bran and madder; when the whole has fermented, until the indigo is reduced to its minimum of oxidation, which may be known by the liquor being of a green colour bearing a rich purple bede, and having copper scales on its surface, as much of lime is gradually added as will hold the indigo in solution. It will be necessary to replenish, as soon as a given portion of the alkaline earth becomes saturated with carbonic acid gas, by adding an additional quantity of lime, and when necessary, of vegetable ferments and indigo. A good workman may keep one of these vats in daily operation for six, nine, or even twelve months without any injury to the colour. It is this continually, together with the small quantity of ferment used, and the great beauty and durability of the colour, which gives to the woad vat so decided a superiority over every other.

The progress lately made in chemical science, has enabled several writers to give a partial theory of the operations of the blue vat. Dr. Bancroft informs us, that the indigo is de-oxidated during the fermentation, and brought back to a green state," and that, " the alkali is used as a solvent for the indigo :" but I would beg leave to suggest, that the alkali produces another, and in my opinion, a very important effect, in combining with the carbonic acid gas.

It is well known to every scientific workman, that the effect produced by the lime, is always in an exact ratio with its causticity, and that the portion which a vat requires does not depend so much on the quantity of indigo used, as it does on the proportion of the vegetable ferments, and it is always observable, that the alkali and ferments are uniformly successful in giving proportions, making due allowance for the causticity of the former.

The rationale of this complicated operation, has never been, and probably never will be satisfactorily explained. It is certain, however, that the indigo is partially de-oxided, as stated by most theoretical writers on the subject ; but I do not consider it as equally certain, that the alkali acts merely as a solvent of the indigo. It appears that carbonic and oxygen gasses are copiously liberated during the fermentation, that these combine in a nascent state, and form carbonic acid gas, and that one of the material effects produced by the caustic alkali consists in its combining with this gas, for which it is well known to have a great affinity, and thereby arresting the progress of the fermentation.

W. P.

* * *

FOR THE AMERICAN FARMER.

June 8th, 1822.

Mr. Skinner,—I have read with much interest the remarks of your correspondents " F." and " Potowmack," and several other pieces in your volumes, on cutting down corn for the purpose of securing fodder. It is not a little strange that such opposite opinions, with regard to the propriety of this practice, should be held by different farmers, who I presume have every opportunity to form correct judgments ; and this contradictory testimony leaves us who are ignorant, and desirous of being instructed on this interesting subject, as much in the dark as before. If the difference in climate, and the varieties of corn cultivated, present no serious obstacle to the extension of this practice, the advantage would be immense to that part of the country, in which corn is the principal food for man and beast, and is regularly made a preparatory crop for wheat. Could we succeed in making this change in the management of fodder, it would save at least a fortnight's labour of all the force employed on our farms. I hope your correspondents will endeavour to remove the doubts as to the propriety of this plan, by stating more fully the facts on which their different opinions are founded. With the view of furnishing my mite towards this object, the following experiments, (from memoranda noted at the time) are submitted. I know of but few others having been made in Virginia below the mountains, which circumstance only, can make mine of the least value.

1817. September 20th. Cut down half an acre of our common soft (16 row) corn, and put up in very small shocks, none exceeding 250 hills. Within 48 hours all were blown down by a storm of wind and rain, which lasted some days. Six days after cutting, the shocks again put up.—When gathered, the grain perfectly sound, but the fodder unfit for food. The blades of the surrounding corn, stripped at the same time, were much injured, notwithstanding having taken more trouble than they were worth, to save them from the effect of the weather. This field was new ground, planted late, and produced about 20 bushels per acre.

1818. August 31st—Cut down two acres of good corn, (just in the state to begin stripping the blades,)—part immediately into shocks of 300 to 400 hills, and the remainder 24 hours after. No rain until the 17th of September. The fodder cured well, and the corn as sound as any part of my crop.

1818. September 10th—Cut 4 acres in a much dryer state than the preceding, and shocked after 10 hours exposure to the sun. Heavy rains, September 17th and October 2d, much of the grain mouldy when gathered.

1819. September 2d—Cut an acre of small flint corn, on rich low ground, and put into shocks after laying 48 hours. When gathered, not one damaged ear observed. The fodder as good as could have been looked for, as it was over ripe when cut, and burnt still more by the sun before shocking.

1820—Cut down 16 acres of flint corn as soon as the time for stripping arrived, put into large shocks (800 to 1000 stalks) after laying 48 hours. The grain proved as good as that left standing, all having much rot from the unusual wetness of the season. The fodder much worse than that stripped at the same time, and on the same piece of low ground.

1820. September 20th—Cut 5 acres of the common soft corn on a rich clay soil, having allowed it to stand as late as possible without injury to the fodder. After laying one *cloudy* day, put into shocks of 400 hills, containing about 5 bushels of corn each. Of the 10 succeeding days, not one was clear of rain, and the weather uncommonly cool. The fodder cured green and of good quality ; but the corn was much injured, about one-fourth being rotten or mouldy. All my fodder gathered in the usual way had been stacked before the bad weather commenced, except from 15 acres, which was in consequence lost.

From my slight experience, it seems that the grain of the small northern corn is not endangered by this treatment, but for the most productive kind for a southern climate, and for the fodder in any case, the practice is attended with much risk. I suppose the labour of cutting down and shocking, with the subsequent trouble attending that mode, to be about equal to that of the common practice of stripping, topping and stacking ; and that the superiority of the former consists in leaving the field cleaned for sowing wheat. This advantage was lost to me on 25 acres of flint corn, which I have made for the last few years, as the soil on which it grows (reclaimed tide marsh) is unfit for wheat ; and I therefore discontinued a practice which seemed so unpromising. I cannot, however, abandon the hope, that we may yet learn to save blades, tops and stalks in their most nutritious state, without resorting to such tedious and unprofitable work as stripping and topping. With this view I request information on the following points.

Has it been ascertained by any experiments more satisfactory than mine, whether the southern corn may be cut and shocked green, with safety to both grain and fodder ?

In what state and in what manner should the corn be ricked, as mentioned by " Potowmack"? Is ricking necessary to the preservation of the fodder, or merely to prevent the numerous shocks remaining in the way until wheat sowing ?

To preserve the grain after early cutting, it should have as much sun and air as possible : for the fodder, much sun or air is highly injurious. To effect one object, we want small shocks, and for the other, large ones. It is then to be presumed, that in attempting both by one operation, neither object would often be perfectly attained. *Theory* points out that the most perfect method would be to separate at first, the ears from the stalk, and to cure the grain and fodder in the manner best suited to each. The *practical* objections to this plan, may be greater than I can now foresee—but, though the trouble might be considerable, there would be but little risk in attempting its execution on a small scale. My experience satisfies me that the stalk may be safely cut as soon as the shrinking of the grain shews that it is proper to strip the blades ; and surely the ears might be safely gathered in the same state, if placed in any situation as open to air and free from damp, as if left in small shocks.

If a farmer can possibly make hay enough for his stock, he had better sacrifice every blade of fodder, than to pursue a practice which both "F" and "Potowmack" seem to consider as necessarily to attend stripping and topping, viz : ploughing in wheat amongst standing corn. Though my neighbourhood is noted for bad husbandry, yet we keep clear of this practice, which is as costly as it is slovenly. As this, however, appears to be the usual course with farmers who are greatly superior to us in general management, it may possibly be of some use to describe our practice. As soon as the blades and tops are secured, and the time has arrived for sowing wheat, we cut off the corn at the surface of the earth, and where the roots are large enough to impede the plough, dig them up and split them with two more strokes with the hoe. The corn is immediately put into small shocks, if before frost, and afterwards as large as convenient. The field then presents a clear surface to plough and harrow, except the spots occupied by the shocks, which are much in the way of ploughing, and must be left naked of wheat. These two serious inconveniences may be removed by a very slight alteration in the work. As many corn rows as will make room enough for the shocks, (2 rows at 6 feet, or 3 at 4 feet width) should first be cut down at convenient distances, (say 20 or 30 rows a part) throughout the field ; a small boy lays the stalks outside of the cleared space, which is immediately sowed, ploughed and harrowed. By this time other *shock-rows* are ready for the plough. The corn from the intervals is then shocked on these rows, and the ploughs proceed regularly and complete the work. In this manner the shocks may be made of any size required by the season, and no matter how numerous, on the shock-rows, without being at all in the way of putting in wheat. If the stalks are removed to the farm-yard before the 20th of Dec., wheat which they covered will not be inferior to the remainder of the field. The sowing on the shock-rows, should not be so much ahead of the intervals, as to make much difference in the coming up of the grain. By neglecting this precaution, I have had the wheat on shock-rows, almost destroyed by the grass-hoppers which were sheltered in the grass on the unbroken intervals. Even among those who shock their corn before sowing wheat, some are still afraid of cutting too early. From *cutting* alone, there can be no danger after (or even at the time of) pulling fodder. The *life* of the stalk is destroyed by stripping and topping, and of course might safely be cut down on the same day, whether late or early. To guard effectually against injury to the corn, it is only necessary to make the shocks small, as long as the stalk and shuck continue green.

R.

* * *

FOR THE AMERICAN FARMER.

GREAT YIELD OF CORN—*On a large scale.*

Fountain Rock, *July 15th*, 1822.

Dear Sir,—In compliance with my promise, I now give you the result of an experiment I made on a field of thirty-one acres, a part of this farm, which was cultivated in corn the last year.

The field had been alternately in corn, oats, wheat and clover, the four preceding years, the crops of corn and oats were nothing remarkable, but the crop of wheat was unusually great, owing I suppose to the quantity of manure that was carried out on the field after the oats was cut off. In the fall of 1820, a large stock of hogs was turned on the clover, the whole of which they rooted up and entirely destroyed—this was done with a view to destroy the worm. In the month of March following, the field was highly manured with stable and barn-yard manures—the last of that month and beginning of the next, it was broke up with one of Murray's two-horse ploughs, (Peacock's patent) and harrowed with a large break harrow. It was then laid out in rows or drills, three and a half feet apart, and the corn planted in the drills one foot apart. The planting commenced on the 26th of April, and was completed on the 1st day of May. Before the corn came up, one half the field was sprinkled on the drills, either with unslacked ashes, or the scrapings of the roads through the farm, and what manure could be collected from the wood heaps at the house and servant's quarters.

The corn came up remarkably strong, and regular, and received not the least injury from the worm, although its devastations were general through the neighbourhood. When about four or five inches high, it was ploughed with a bar-share plough, throwing the land from the corn, at which time it was hoed and thinned, leaving the stalks about one foot apart—about ten days after, it was again ploughed with the bar-share plough, throwing the land back to the corn—a few days after, it was twice ploughed with the double shovel plough—this was the entire cultivation it received.

The corn was gathered at the usual time, and great pains was taken in the gathering and measuring by my manager. The whole being measured by him in a sealed barrel kept at my mill for that purpose. The result was three hundred and ninety-six barrels of ears of good corn. The field was surveyed this summer by a sworn surveyor of this county—and his report was thirty-one acres, including rock breaks, which he estimated to contain one acre, so that it may be fairly stated from actual measurement both of the field and product, at three hundred and ninety-six barrels from thirty acres of land, or thirteen barrels, or sixty-six bushels and a fraction, to the acre. The corn is of the yellow flint kind, with a red cob. There was an evident difference in the field; the half that was sprinkled on the drills before the corn came up, being decidedly the best. The season was uncommonly propitious—the corn never suffering for rain, except for a short period in the month of August, just before it began to fill.

I am with great respect,

Your ob'dt.

SAMUEL RINGGOLD.

General Ringgold's communication is valuable, because the experiment was made on a large scale, and with his ordinary process of culture—not a SINGLE *acre cultivated for Premium. It is our own fault, or rather misfortune, that we have not had the pleasure to see General Ringgold's estate—one of the most extensive and fertile, in a proverbially fertile county—enriched moreover, by a well kept and valuable stock of cattle, of the best English blood, at the time of their importation.*

Editor Am. Farmer.

TO THE EDITOR OF THE AMERICAN FARMER.

☞ TO DESTROY SHEEP-TICKS.

Rahway, April 9, 1822.

I have seen in the Farmer and elsewhere, directions for destroying Sheep Ticks, by means of snuff, tobacco smoke, &c. which must be troublesome, require to be repeated, and I think doubtful as to the effect. A very easy and most effectual remedy is detailed in the "Complete Grazier" and in "Parkinson on Live Stock." It is nothing more than a weak solution of arsenic, in which the lambs are to be dipped a few days after shearing the sheep, as the ticks, having then no harbour on the old sheep, will resort to the lambs for shelter—this is the time to destroy them. The quantity of arsenic I used for about 150 lambs was extremely small, and I was satisfied that still less would have been enough, as the ticks on the lamb I examined about one hour after the operation were all dead. Not the smallest injury occurred to the sheep, due care of course being taken to keep the head out of the water. Three persons are necessary, two to hold and dip the lamb, and the third to squeeze the wool, while the lamb is held over the tub. The injury sheep sustain by these vermin, is very great, and the advantage to my flock by their destruction, was visible in the more healthy and thriving condition of the lambs after the operation.

With great respect, I am thy friend,

HUGH HARTSHORNE.

Editorial Correspondence.

Extract of a letter dated near Upper Marlboro, Prince George's Co. Md. 14*th July* 1822.

"The weather is now seasonable, and our crops of corn and tobacco promise well. The corn crop more forward generally, than I recollect of having before seen."

Extract of a letter to the Editor, dated ALBRIGHT, N. C. 12th July.—"Our crops of wheat are very light—Cotton and Tobacco at present very promising."

Another letter dated Columbia Court-House, Geo. 11th July, says:—The rust has injured our wheat and entirely destroyed the fields in many places. Northern flour is consumed now two hundred miles above the seaboard.

Extract of a letter, to the Editor, dated Sunbury, Georgia, 10*th July*, 1822.

"The farmer's prospects in this section of our country have been cut short from the repeated and excessive fall of rain, attended generally with severe wind, which has done serious injury to our corn and cotton crops."

THE FARMER.

BALTIMORE, FRIDAY, JULY, 26, 1822.

☞ THE TITLE PAGE AND INDEX for the *third volume* of the American Farmer will be committed to the mail at the Baltimore Post-Office, along with our next number—that is, on Friday next—so that those, if any, who happen not to receive it in due course of mail after that day, should lose no time in recovering it. A few extra numbers have been stricken off to supply those who have the *receipt* of every number *guaranteed* by the payment of *five dollars in advance*.

Circumstances which it is hardly necessary, now to explain, have delayed the appearance of *this* Index. Owing to some untoward obstacles, not to be foreseen, a long time elapsed before the work could be taken in hand. The desire to make it very full and satisfactory has increased the volume of it, much beyond what was anticipated; and thus retarded its final completion, until we fear the patience of our friends is exhausted. The consolation left us, is the hope that when in the course of another week it reaches their hands, compensation will be found for its delay, in the amplitude of its details, and the minuteness and accuracy of its references to every subject alluded to, or treated of, in any and in every page of the volume.

We have experienced that it is not prudent to announce, on all occasions, what we wish or intend to accomplish for the benefit or gratification of our subscribers; nevertheless, we may venture to advertise our respected patrons that, after the present half year, the Index shall proceed—*pari passu*—with the work itself—each number shall be indexed as it is published, and thus each volume may go at once into the hands of the binder.

Prices of the following articles collected for the American Farmer this day.

TOBACCO.—Fine yellow and red mixed—2 hhds. from Mr. Thomas Hammond, Frederick county, $25 50 cts.—Fine red Patuxent, John Leach of Calvert county, $13—Two from Benedict, $12—Good red, $8 to $10—Common, $5 to $7—Best seconds, $4 to $6—Worst do. $1 to $2 50 cts.—

GRAIN.—White wheat, none in market, $1 25—Red, $1 15 to $1 20—White corn, 65 to 70 cts.—Yellow do., 63 to 68 cts.—Oats, 25 to 27 cts.—Rye, 65 to 70 cts.—Wharf flour, from $6 25 to $6 37½ cts.

JONATHAN S. EASTMAN,
Inventor and Proprietor of the PATENT CYLINDER STRAW CUTTER,

Respectfully informs Agriculturists and the publick generally, that he continues making the above Machines, and has now on hand a few of each size, viz: common size with a permanent bottom, capable of cutting 70 bushels per hour; price $45—the same size, with a revolving bottom, $50—and the large size, that will cut from 90 to 100 bushels per hour, $60. As the above prices may appear high, he requests persons wishing to purchase to call and see the machines,—he can safely pronounce the workmanship to be of the best kind, and for ease, despatch and efficacy in operation and durability of construction, they are unequalled.

The premium at the late fair and cattle show, held by the Maryland Agricultural Society, was awarded to this machine (where four others were exhibited)—as also the Premium by the Philadelphia Agricultural Society, at their Exhibition, in June last, which with the many certificates of gentlemen near this city, who have purchased and fully proved their value, supercedes the necessity of any thing now being said, than, that the proprietor will warrant them to feed and cut every description of long forage, either straight or tangled, coarse or fine, and to do it with much greater facility and ease, than any other machine ever invented. They are perfectly adapted to cutting corn stalks and sugar cane, which must render them very valuable to planters of the Southern States.

At the late fair, a number of gentlemen said they would take machines in the fall, and some have not yet given in their orders, they are requested to do so soon, in order that the proprietor may be prepared in season with the kind they may want.

A machine may be seen in operation at the proprietor's shop, four doors above Eutaw, in Market street.

HORTICULTURE.

POMARIUM BRITANNICUM,

An Historical and Botanical account of Fruits, known in Great Britain, by Henry Philips.—Second Edition.

(Continued from page 138.)

CACAS.—THEOBROMA;

OR, CHOCOLATE TREE.

In Botany, of the Polyadelphia Decandria Class: Natural Order, Columniferæ.

The generic name is derived from two Greek words, signifying the food of the gods.

The cacas, or chocolate-tree, is a native of South America, and is said to have been originally conveyed to Hispaniola from some of the provinces of New Spain, where besides affording the natives a principal part of their nourishment, it also serves the purpose of money, 150 of the nuts, (which are about the size of Windsor beans,) being considered of the same value as a rial by the Spaniards.

It is not only an article of great internal consumption, but for exportation it is one of the most valuable fruits. Guthrie considers the cacas from which chocolate is made, as the next considerable article in the natural history and commerce of Mexico, to gold and silver. A garden of cacas is said to produce the owner twenty thousand crowns a year.

Chocolate was not known in England until the eleventh year of the reign of Henry the Eighth, although twenty-three years had elapsed since Columbus had discovered the country of which it is a native.

Chocolate is esteemed the most restorative of all aliments, insomuch that one ounce of it is said to nourish as much as a pound of beef.

An acquaintance, on whose veracity I can rely, informed me, that during the retreat of Napoleon's army from the North, he fortunately had a small quantity of little chocolate cakes in his pocket, which preserved the life of himself and a friend for several days, when they could procure no other food whatever, and many of their brother officers had perished for want.

In all countries where chocolate is known, it is esteemed, and found to be a suitable diet for all ages, more particularly for infants, old persons, those of consumptive habits, and such as are recovering from sickness.

It is related in Hawkesworth's Voyages, that Commodore Byron, in his passage through the South Seas, found plenty of cacas in the island called King George's Island, and that many of his men, who were so afflicted with scorbutic disorders that their limbs were become black as ink, and who could not move without assistance, and suffering excruciating pain, were in a few days completely cured by eating these nuts, and able to resume their accustomed duties.

I have often been surprised that the making of the small chocolate cakes for eating, should not have been attempted by some persons in London, when they are in such demand at Paris, where a celebrated manufacturer of these chocolate trifles assured me that he had then, in 1816, received an order from a late high personage in England that would exceed £500.

The oil of the cacas-nut is the hottest of any known, and is used to recover cold, weak, and paralytic limbs. The Mexicans are said to eat the nuts raw, to assuage pains in the bowels.

We cannot but regret that the cultivation of this valuable plant should have been discontinued in our West India islands, nor can we be surprised when we find that the duty, including the customs and excise, amounted to upwards of four hundred and eighty per cent. on its marketable value, when manufactured.

It is carefully cultivated in all the French and Spanish settlements in the warmer parts of America. For what reason our ministerial policy should have so widely differed from that of the neighbouring courts, I am unable to guess; but I trust that the alteration which has lately taken place in the duty on chocolate, will prove a benefit to our revenue, an advantage to our colonies, and a credit to the ministers who adopted this measure.

It is certain that the cultivation of the cacas plantation was both extensive and successful in the British sugar islands, for many years after they had become subject to our government.—Blome, who published a short account of Jamaica in 1672, speaks of cacas as being at that time one of the chief articles of export: "There are," says he, "in this island, at this time, about sixty cacas walks, and many more now planting." At present, I believe, there is not a single cacas plantation from one end of Jamaica to the other. A few scattered trees, here and there, are all that remain of those flourishing and beautiful groves which were once the pride and boast of the country. "They have withered with the indigo manufacture," says Edwards, "under the heavy hand of ministerial exaction."

The produce of one tree in Jamaica was generally estimated at about twenty pounds of nuts.—The produce per acre was rated at one thousand pounds per annum, allowing for bad years.

The chocolate-tree grows to about six feet high before the head spreads out, and it seldom exceeds from sixteen to twenty feet in the whole height, the boughs and branches beautifully extending themselves on every side, resembling the heart cherry-tree, the leaves being much of the same shape. The tree bears leaves, flowers, and fruit, all the year through; but the usual seasons for gathering the fruit are June and December. The flowers spring from the trunk and large branches: they are small, but beautiful, and sometimes pale red, but most commonly of a saffron colour: the pods are oval and pointed, and contain from ten to thirty nuts each, almost like almonds, adhering to one another by soft filaments, and enclosed in a white pulpy substance, soft and sweet, which some persons suck when they take them out of the shells. The pods change from green to a yellowish colour when they reach to their maturity, which is known by the rattling of the nuts, when the pods are shaken. When gathered, it is usual to lay the pods in heaps to sweat for three or four days before they are opened; they are then exposed upon mats or skins, to the sun, every day for about a month.

The cacas-tree is permitted to bear a moderate crop of fruit the fourth year after the seed has been sown: but if the plant is weak, a greater quantity of the blossoms are gathered, in order that it may recover strength. The tree attains it's full perfection in eight years: after that it will continue to produce fruit for thirty years or more, if planted in a good soil; but it is obnoxious to blights, and shrinks from the first appearance of drought. In early times the planters had many superstitious notions concerning this tree, and among others, the appearance of a comet was always considered as fatal to the cacas plantation.—*Lunan.*

The chocolate-tree was grown in our stoves as early as the year 1739.

CASHEW-NUT.—ANACARDIUM.

In Botany, a Class of the Polygamia Monæcia Class. Natural Order, Holoraceæ.

The generic name is derived from two Greek words, signifying without a heart; because the fruit, instead of having the seed enclosed, has the nut growing at the end.

The cashew-tree, is a native of the Brazils, and other parts of America, where it grows to the height of twenty feet or more, in favourable situations. Lunan gives the following account of it in his *Hortus Jamaicensis.* The fruit is full of an acrid juice, which is frequently used in the making of punch. To the apex of the fruit, grows a nut, of the size and shape of a hare's kidney, but much larger at the end which is next the fruit than at the other end. The shell is very hard, and the kernel, which is esteemed the finest nut in the world, is covered with a thin film. Between this and the shell is lodged a thick, blackish, inflammable liquor, of such a caustic nature in the fresh nut, that if the lips chance to touch it, blisters will immediately follow. The fruit is said to be good in disorders of the stomach; for the juice of it cuts the thick tough humours, which obstruct the free circulation of the blood, and thus removes the complaint. This juice, expressed and fermented, makes a fine rough wine, useful where the viscera or solid system has been relaxed. Barham, who has written on this fruit, says, "the stone of this apple appears before the fruit itself, growing at the end in the shape of a kidney, as big as a walnut. Some of the fruit are all red, some entirely yellow, and some mixed with both red and yellow, and others perfectly white, of a very pleasant taste in general; but there is a great variety, as some more sharp, some in taste resembling cherries, others very rough like unripe apples.—The taste of most of them is sweet and pleasant, but generally goes off with an astringency or stipticity upon the tongue, which proceeds from it's tough fibres, that run longwise through the fruit. When cut with a knife, it turns as black as ink. The generality of the fruit is as big and much of the shape of the French Pippins, and makes an excellent cider or wine." Barham adds, that he has distilled a spirit from the nut far exceeding arrack, rum or brandy, of which an admirable punch is made.

The flowers are very small, grow in tufts of a carnation colour, and are very odoriferous. The leaves much resemble those of the common walnut-tree in shape and smell, and a decoction of them is equally effectual in cleansing and healing old wounds.

The oil cures the herpes, takes away freckles and liver spots, but draws blisters, and therefore must be cautiously made use of; it also takes away corns, but it is necessary to have a very good defensive round the corn to prevent inflaming the part. The inside kernel is very pleasant to eat when young, and, before the fruit is too ripe, exceeding any walnut; and when older and drier, roasted, is very pleasant, exceeding Pistachio nuts or almonds; and ground up with cocoa, makes an excellent chocolate.

It has been observed, that poor dropsical slaves who have had the liberty to go into a cashew-walk, and eat what cashews they please, as well as the roasted nuts, have been recovered. These trees are of quick growth: Barham says he has planted the nuts, and the young trees have produced fruit in two years after. They will continue bearing fruit for more than a hundred years. Many are now flourishing in Jamaica that were planted when the Spaniards had it in possession.

I have lately received from Jamaica a cashew apple, bearing two distinct nuts, which was considered so rare a circumstance that it was preserved in spirits. It's appearance is unnatural, resembling a lemon pippin apple, with two lambs' kidneys stuck on the end.

The wood of the cashew is excellent, strong, and lasting timber.

These trees annually transude in large quantities, *viz.* often to ten or twelve pounds' weight of fine, semi-transparent gum, similar to gum-arabic, and not at all inferior to it in virtue and quality, except that it contains a light astringency, which perhaps renders it the more valuable in many respects ; for this reason it is often used as a succedaneum in the Jamaica shops.

The thick oil of the nut or shell tinges linen of a rusty iron colour, which can be hardly got out ; and if any wood be smeared with it, it preserves it from decay. From the body of this tree is procured, by tapping, or incision, a milky juice, which stains linen of a deep black, and cannot be discharged. Dr. Grew mentions the juice being used for staining of cottons ; but it is doubtful which of the species he means, though Sir Hans Sloane supposes it to be of the acajou or cashew, here mentioned.

Long seems of opinion that this juice has the same property as the Japan lac.

The oil between the rinds of the nut, if held to the candle, emits bright, salient particles. This oil is used as a cosmetic to remove freckles and sun burning, but the pain suffered, makes it's use not very frequent.—*Grainger.*

The pith, or medullary part of the anacardium, is extremely pungent and acrimonious ; whence the ancients made great use of it in cold diseases of the head, particularly to strengthen the memory ; but the abuse of it sometimes making them stupid, delirious, or even mad, the moderns rarely venture on it's use, at least not without great correctiveness.—*Chambers.*

The cashew nut-tree can only be rasied in stoves in this country, where it has been cultivated since the year 1699.

(To be continued.)

IMPROVEMENT OF THE SUSQUEHANNAH—REPORT

Of the Committee of the Senate of Maryland, on Internal Improvement, to whom was referred so much of the Executive Communication as relates to that subject. December Session, 1821. *Transmitted for publication in the American Farmer, by order of the Legislature of Maryland.*

The Committee to whom was referred so much of the Governor's Message, as relates to Internal Improvement, beg leave to report:

That whatever difference of opinion may heretofore have existed, as to the expediency of Internal Improvements, the time appears now to have arrived, when every citizen of the State of Maryland, is solicitous that all proper means should be adopted to bring into life and activity every Internal Improvement of which the state is susceptible. That fully aware of this feeling, your Committee would respectfully suggest some distinct objects of Internal Improvement, which they cannot but regard as of the very first importance and welfare of the state—that is: The improvement of the Navigation of the Rivers Potomac and Susquehannah, the cross cut Canal, (as it is usually called) to unite the Bays of Chesapeake and Delaware, and the making of a turnpike road from Boonsborough to Hager's-town, with a view to join the great national road, lately completed by the United States, from Cumberland to Wheeling in the state of Virginia.

With respect to the improvement of navigation of the river Potomac, your committee are of opinion that any reasonable aid should be afforded by the State, to effect that desirable object, but when they find that the State of Maryland has already advanced one hundred and fifty thousand dollars for that purpose, without deriving the slightest benefit from it, they cannot but think that it is time to pause before advancing further sums of money, except so far as to complete the surveys already taken or undertaken, to procure correct estimates of the expenses of effecting the proposed object, and the extent to which the improvement of the navigation of that river is intended to be carried.

And here your committee would remark, that some doubts of the value of this improvement has been suggested to their minds, by a perusal of the following extract from the report of the late Mr. Latrobe, dated March 16th, 1808, to Mr. Gallatin, then Secretary of the Treasury of the United States: "The trade of this canal, especially during the year 1807, has been so great, that there appears every prospect of its becoming a productive work, in those years in which there is a considerable and equal quantity of water in the river, *but on this circumstance it must always depend.*—The information repecting it which can be obtained from the company on the spot, renders it unnecessary for me to say more upon it."

Mr. Latrobe's opinion upon a subject of this nature, being in the estimation of your Committee entitled to the greatest respect, they conceive that before any further advances should be made for the improvement of the navigation of the Potomac, the doubts suggested by this extract from his report, should be fully and accurately examined into, in order to enable the General Assembly to form a more correct opinion upon the subject, than the information which they now possess will enable them to do. It appears from a report of the Potomac company, that the total amount of tolls received by them from the 1st day of August, 1799, to the 1st of August 1817, was $162,379 95 cents, or $9021 per annum, all of which amount, except the sum of $3,890 55 cents, was applied to the further improvement of the river. The value of property brought down the river during the same period of time is estimated at $7,002,370 62 cents, equal to $389,000 annually.

As it regards the improvement of the navigation of the river Susquehannah, your Committee, viewing it as a subject of great and boundless importance to the state of Maryland, have given to it their fullest and most attentive consideration. The attention of the citizens of Maryland has recently been directed towards it, and all, convinced of the vast utility and benefit to be derived from it, seem anxiously solicitous that some Legislative aid should be extended towards it. Under these circumstances, your Committee cannot but recommend it as a subject worthy of the deepest reflection, and fraught with considerations of vital importance to the state of Maryland.

That particular district of country to which the benefits of the turnpike roads in Maryland are most immediately extended, lying between the Susquehannah on the one side, and the Potomac on the other, and extending north west ward from Baltimore, to the north mountain, comprehending the Conococheague valley, has been accurately measured on a map of the country, and found to contain 5,000 square miles. Those portions of the country bordering upon the various tributary streams of the Potomac, westward of the south mountain in Maryland, and the blue ridge in Virginia, have been also measured and found to contain 10,000 square miles. But when your Committee directed their attention to that portion of the country through which the Susquehannah flows, they embrace within their view a field of greater and more enlarged dimensions. By an accurate measurement of those expanded regions situated upon the Susquehannah, and its numerous wide spreading branches, they have been found to contain about 20,000 square miles, exclusive of 10,000 square miles more of adjacent country lying upon other waters in the states of Pennsylvania and New York, for the produce of which country, should the navigation of the Susquehannah be improved to the extent contemplated, Baltimore must inevitably become the most convenient Market.

From these estimates, it is abundantly evident, that the trade of the Susquehannah, (flowing as it does through a country of vast extent, and inferior in point of fertility to no portion of the United States,) is a trade involving in its nature a very extensive permanent and growing interest.

Were the navigation of the Potomac improved to the utmost possible extent, its trade must be considered but of minor importance when compared with that of the Susquehannah ; the Potomac flowing as it does through a country of comparatively small extent, and by no means celebrated for its richness and fertility. In addition to this it may be remarked, that to however great an extent the productions of the soil may find their way into the Potomac, however extensive the demand for foreign commodities at George Town and Washington, the state of Maryland can derive but little benefit from it. The advantages secured flow into a different channel ; they go to fill other coffers—not those of the state of Maryland. But improve the navigation of the Susquehannah to the extent proposed, and you bring to the City of Baltimore a trade of incalculable extent and value, the benefits of which must be imparted to every section of the state, and which cannot fail richly to remunerate us for whatever aid may be extended to it.

The obstructions to the free navigation of the River Susquehannah, exist near tide water, that is to say, below Columbia.—Above that town the difficulties are removed by Pennsylvania, and a boat navigation at present exists to near the New York line.—The distance from Columbia to Port Deposit is thirty five miles, twenty miles of which may be considered as tolerably good navigation, either in ascending or descending.

From Turkey Hill, to Neale's Falls, near Muddy Creek, a distance of fifteen miles, the navigation is bad, and it is here that the principal obstructions exist, the removal of which are so anxiously desired.

Your committee have taken considerable pains to ascertain the value of the produce which has come down the Susquehannah for several years past ; they have however only been able to procure an estimate of what has come down from last spring to December past ; and they find it to be valued at $1,121,250. The number of rafts and boats, that came down the river to Port Deposit, during the same time, was 925 rafts of lumber, averaging 25,000 feet each, and 535 Arks loaded with flour, whiskey, pork, &c.

The Susquehannah canal, commencing at the Maryland and Pennsylvania line, and ending at the head of tide water, is now completed and in good order for the passage of rafts. It appears to have a full supply of water at those seasons of the year when the river is not high, and insures a safe passage for all produce that may come down the river to the mouth of the canal.

It is certainly of great importance to the state of Maryland, that this canal should be kept in perfect condition, and that the proprietors be protected in all their just rights.

The committee have only to state in conclusion upon this subject, that when the water of the Susquehannah is high, boats and rafts frequently pass to the head of tide water, without entering the canal.

The committee now come to the third object of Internal Improvement, to which they are desirous of directing the attention of the Legislature, that is, the Canal to unite the bays of Chesapeake and Delaware.

In the year 1799, the Legislature of Maryland passed a law, which in the year 1801, was followed by similar laws on the part of the Legislatures of the states of Delaware and Pennsylvania, incorporating a company with a capital stock of $400,000 for the purpose of opening a canal between the bays of the Chesapeake and Delaware. In pursuance of these laws, subscriptions were received for nearly the whole amount of the two thousand shares, at 200 dollars each. Surveys were made—engineers and workmen employed—a route selected for the canal through the Isthmus which separates the two bays, and some material progress made in the execution of the work. But unfortunately, after having gone thus far in the execution of this important object, and after having expended upwards of 100,000 dollars, in the purchase of water rights, and in the construction of a feeder and reservoir, the work was suspended in the year 1803, in consequence of the non payment of the subscriptions—and it appearing daily more evident, that the whole amount of the capital stock, even if subscribed for and collected, was a sum totally inadequate to the completion of so extensive a work. At this period also, the energy and spirit of the company began to subside, unaided as it was by further support and encouragement, or by that individual enterprise and activity which had enabled them up to that period to continue their operations.

By connecting the waters of the Chesapeake and Delaware, the contemplated canal will throw open an internal navigation of great extent, from the north west part of the state of New York to the southern extremities of the state of Virginia.

The particular advantages which the state of Maryland would derive from this improvement, need scarcely be detailed by the committee. They will suggest themselves to the understanding of every reflecting man. In a national point of view, all will concur in the opinion of its importance, and looking to an event which your committee is by no means anxious should soon occur, but, which in the opinion of the committee may reasonably be expected to take place at some distant period, it may be regarded as an object of peculiar interest, as productive of the means of national defence, affording as it no doubt will a facility of transportation of troops, ordinance and military stores, from one part of the country to the other, the want of which was materially felt during our late war with Great Britain.

Beneficial as it certainly will be to the state of Maryland, the committee have thought proper to direct the attention of the legislature towards it, but viewing it as an object of national concern, and not alone productive of local advantage, the committee would remark that it is a subject to which the attention of the national legislature should be drawn.

The canal begins at Welch Point on the Elk river, an arm of the Chesapeake, and is to terminate at a distance of twenty two miles, on Christianna river, a branch of the Delaware. At low water the depth of water in Christianna river is nine feet, and in Elk river twelve feet, within one hundred feet from the shore. The tide rises four feet in both rivers. No expensive aqueducts or bridges are to be made, and the principal obstacles have been already overcome. The supply of water drawn from Elk river by a feeder which is now completed six miles in length and three and a half feet in depth, and which is itself a boat canal, united by a lock of ten feet high, to the main canal, is calculated to fill daily one hundred and forty locks, a quantity sufficient, on an average, for the daily passage of twenty four vessels. The canal is twenty six feet wide at the bottom, and fifty feet at the water's edge. It is intended for vessels of from forty to seventy tons, drawing seven and a half feet.—The banks being intended for towing paths, are twenty feet wide, one of which may be converted into a turnpike road, being raised three feet above the level of the water, and will, by increasing the height of the lock gates one foot, admit a depth of nine feet water in the canal. The expense of digging one mile through rocky ground was $15,000, and that of digging the same distance through a level country free from obstructions, $2300, which gives an average of $7,650 per mile. The whole length of the canal is about twenty-two miles, and the whole cost is computed to be about $850,000. These estimates were made at a time when labor was comparatively high; it is presumed they would be much less at the present time.

This information of facts the committee have thought proper to furnish, in order to enable the legislature to form a correct opinion upon the subject.

The fourth and last object to which the committee have directed their attention, and which they have thought it proper to direct the consideration of the legislature, is the making of a turnpike road from Boonsborough to Hager's-town to join the great national road, leading from the latter place to Wheeling, in the state of Virginia. Upon this subject, the committee would remark, that this important object is now likely to be accomplished, in conformity with the law passed at the present session, and which your committee trusts will be carried into full and complete effect.

By order,
THOMAS W. LOOCKERMAN,
Com. Clk.

* * *

FOR THE AMERICAN FARMER.

A NEW INDUCEMENT OFFERED FOR THE FORMATION OF AGRICULTURAL SOCIETIES.

The following is extracted from the last annual report of the RALEIGH PEACE SOCIETY.

Let none be surprised, or express a doubt, when we say AGRICULTURAL SOCIETIES are an important appendage to our institution. The scriptures have predicted, what has already become true, that military men are laying aside their *implements of war* and of *death*, and are devoting themselves to *Agriculture* and *the arts of peace.* The world has long ago had an example of this *wise choice*, in a *Cincinnatus*. In modern times we have it in a *Washington*, whose example and repeated declarations go hand in hand.—Allow us here to make use of his own words:—"Your young military men who want to reap the harvest of laurels, don't care how many seeds of war are sown; but, for the sake of humanity, it is devoutly to be wished that the manly employments of *Agriculture* and the humanizing benefits of *commerce*, should supercede the *waste of War*, and the *rage* of *Conquest;* that the swords might be turned into ploughshares, and spears into pruning hooks, and as the scripture expresses it, the nations learn war no more."—We are informed by judge Peters, that it was in contemplation by this same *illustrious person*, and the object was measurably carried into effect, in the year 1796, to bring under the consideration of Congress, "*his great plan* of engrafting the subject of AGRICULTURE, into a national system of education, and placing the cultivators of the soil and their instruction and excitements to improvement in their art, under national patronage. He was anxiously solicitous in this patriotic endeavour. It was not imputaible to him that it failed. Had he been fortunate enough to accomplish it no action of his, life would have deserved more celebrity, and public gratitude."

Such is the constitution of the human mind, that it must have some concentrating object for the exercise of its powers. If the transition from *war* to *peace* be too great for immediate and general adoption, let us endeavour to call forth the ardent and active minds of men to the contemplation of the smiling fruits of industry.—Let us cordially receive the sentiments of our political father, and philanthrophic statesman; and endeavour to inculcate a love of Agricultural pursuits.

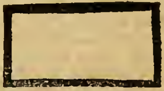
* * *

TO THE EDITOR OF THE AMERICAN FARMER.

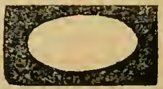
DEAR SIR,

I fear you have forgotten me, as I have not lately been favoured with seeds.

I have been secured from fire by making the inside of my chimnies circular, as they are easily swept or may be burnt; when my wooden house was building, I ascended the ladder and found my brick layers very negligent in forming the chimnies, and in putting in mortar, the usual from is an oblong square as thus:—



I made them put in broken bricks at each corner, and plaster them in the inside as thus:—



You will readily conceive that this will prevent the fire from going through the bricks which are frequently hollow between, for want of mortar.—Mr. Latrobe very much approved of this mode.

Pray explain it in appropriate terms, and consult some builder to have his opinion. That many houses in the country are annually destroyed by fire, in consequence of defective chimnies is notorious: if these ruinous consequences can be prevented by practising this hint—haud inutile vixi. I think the mode will be adopted as the expense is trifling, broken bricks only being used.

Your's most truly,
T. LAW.

I am burning sod, and am delighted by success.

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FOR THE AMERICAN FARMER.

OYSTER SHELLS AS MANURE.

I cannot distinctly answer the inquiry of a correspondent of the American Farmer, W. R. whether *ground oyster shells* have been used as a manure; but I can state, what will probably meet his views and wishes, that I have seen fields covered with oyster shells, *in their entire state*, with great *apparent* advantage to the soil.

In the spring of 1814, I made a tour along the banks and sounds of Carolina, from the line of Virginia to the mouth of Cape Fear river, and several times witnessed fields that were white with oyster shells, particularly on the main land fronting Currituck sound, and was told that such fields were much more productive than contiguous ones of similar soil that were without shells. The lands bordering on this sound have a rich soil of loam and sand; and the most remarkable growth that I remember was the chinquopin; but it had also grape vines, dog-wood, pine, &c. The shells were placed there before the memory of the present inhabitants, and by means unknown to them. They were worn smooth and a good deal diminished in size. I was told that in the driest weather the earth immediately under the shells would be usually moist, and to this accumulation or retention of water, as well as to the admixture of the slowly decomposed shell with the earth, was the fertilizing effect ascribed, which had continued for perhaps a century: perhaps also something might be ascribed to the reflection of light and heat from so many white and polished surfaces. I think I have seen two or three fields of fifty acres each and upwards, that had a shell for every 20 or 30 square inches of surface. What I thought very surprising, though the fertilizing effect of the shells was universally admitted, and though much of the land that was destitute of them was tired, almost to exhaustion, and the shores and banks of the sound contained an abundant supply of the means of resuscitation, and though good productive land there at that time bore a high price, yet no one had ever practised upon the wise hint which natural causes or their indian predecessors had given them. If W. R. possesses the means of making the improvement in manuring which he desires information of—I hope he will not neglect them, nor omit making the public acquainted with the successs of his experiments.

CALVIN JONES.

Wake Forest, *Nov.* 25, 1821.

P. S. On reflection, I think I have rated the quantity of shells which appeared upon the Currituck fields too high; but when I saw them nearly eight years ago, my mind was so much occupied with subjects quite foreign to agriculture, that I fear the accuracy of my recollection of the little I observed will not justify a specific correction. I vouch for the general facts.

FOR THE AMERICAN FARMER.

☞ QUERIES BY A CORRESPONDENT.

The Editor of the American Farmer will oblige a number of his subscribers, if he will call upon his correspondents for information upon the following points.

What are the properties of the weed known as the St. John's Wort?

What are its effects upon grass lands—upon stock of all kinds, and upon grasses?

Which are the most judicious methods to extirpate it?

Montgomery County, (*Md.*)
July 12*th*, 1822.

PRODUCTS OF AGRICULTURE.

The amount of the product of the well-cultivated lands of the Eastern States, would astonish any but those who have been accustomed to the river bottoms on the western rivers, or to the alluvial lands. We can scarcely believe when we read of them; and should not believe it, were not the facts too well vouched to be questioned. We lately met with an account of the premiums given at a Massachusetts meeting, some time last autumn, and a few of the results are stated below, for the gratification of the curious in such matters.

OF POTATOES.

Five hundred and fifty-one and a half bushels were raised on one acre of land, by Payson Williams, Esq. of Fitchburg, in the county of Worcester, (from 24 bushels of seed.)

OF TURNIPS.

Seven hundred and fifty-one bushels, of the common English sort, weighing fifty-four pounds to the bushel, were raised by Messrs. T. and H. Little, on one acre of ground.

OF MANGEL WURTZEL.

Six hundred and forty-four bushels were raised on one acre of ground, by John Prince, Esq. of Roxbury.

OF CABBAGES.

Forty-three tons nineteen hundred and ten pounds weight, were raised, by E. H. Derby, Esq. of Salem, on one acre, one quarter of an acre, and twenty-seven rods, being at the rate of thirty one tons to the acre.

Mr. Derby received also the premium of thirty dollars, for having raised the greatest quantity of vegetables, (grain, peas, and beans excepted,) for winter consumption, of the stock on his own farm. He raised the last season on his farm, 749 bushels of mangel wurtzel, 530 bushels of carrots, 526 bushels Swedish turnips, 1288 bushels of potatoes, 126 bushels of Russian raddishes, 757 bushels of common English turnips, 43 tons and 19 hundred weight of cabbages, and fifteen ox cart loads of pumpkins.

OF RUTA BAGA.

Mr. David Little raised six hundred and eighty-eight bushels on one acre.

OF WHITE BEANS.

Thirty-two bushels and four quarts were raised on one acre by Wm. Mears, of Marblehead.

Nat. Int.

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Selections from late numbers of the London Farmers' Journal, received at the Office of the American Farmer.

QUERIES ON THE CULTURE OF LUCERN.

Perthshire, *May* 26, 1821.

Sir,

May I take the liberty to beg that you will insert the following Queries in your valuable Journal, in hopes that you, or some of your correspondents, may, through its medium, convey such answers as may be useful to some of your north country readers. What time of the season should Lucern be sown? Should it be sown in drills, and at what distance? How much seed will sow a Scots acre, and what is the general price per lb.? Is it sown with any other crop? How long is it before it acquires maturity? What may be the relative value of an ordinary crop for soiling compared with clover and ray grass, at 200 stone per acre? It being a native plant (*medicago sativa*, I suppose) at what height* is it cultivated with advantage? Is it probable that it might succeed in Scotland? Your answer to these queries will infinitely oblige, Sir,

Your obedient servant,
A SCOTS FARMER.

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* *As to elevation or latitude?—Editor Farmers' Journal.*

ON BARKING FRUIT TREES.

Comely Garden, *near Edinburgh*
Sir, *May* 23, 1821.

A paper of your s, taking notice of my practice of peeling Fruit Trees, was yesterday sent me by Sir John Sinclair. As you wish to have some information from me on that subject, and as I do not wish to conceal any thing that may be useful, I shall endeavour to answer your queries as well as I can in an epistolary correspondence.

1st. I published, a few years ago, on this subject, a small pamphlet, entitled "A Treatise on the Physiology and Pathology of Trees." I believe it is not now to be found any where but with myself. I shall send a copy to Sir John Sinclair, to get transmitted to you. 2d. The practice is conducted by taking off all the bark but the inner; that is, leaving it next the alburnum about the thickness of a shilling: I do it on all kinds of fruit trees in my pessession, as pear, apple, cherry and plum. 3d. On the trunks, and large boughs of old trees, it may be done any time in winter, not beginning earlier than the middle of November; young trees, and smaller branches, must not be done till the month of March the soonest. 4th. The effect both formerly and now, has exceeded my most sanguine expectations, in rendering the trees more productive, and improving the quality of the fruit; for I never considered it an experiment, but only following out a law of Nature. I know some people have not only injured, but actually killed their trees, by attempting to follow my practice; but this I must ascribe to judicious or clumsy performance.—You are mistaken with regard to the case referred to by Sir John Sinclair: mine is perhaps the richest and deepest soil in Britain, and, *of consequence*, much given to canker. Mr. Knight, in his Treatise on the culture of the apple, has made some very injudicious observations, but has not followed them out. He says, "in very rich soils, such as old fold yard, I have scarcely been able to preserve the native *crab* from canker."—You will seldom find moss and canker on the same soil; canker proceeds from a rich cultivated soil, *moss* from a poor, barren, uncultivated soil. If there is any other information, I shall always be ready to give it cheerfully. Perhaps you may hear from me on another subject, when more at leisure.

I am, with respect,
Sir, your's sincerely,
P. LYON.

☞ We shall be very glad of this gentleman's future correspondence, and hope to receive his pamphlet as specified. We doubt not but so accurate an observer will attend to such remarks as the subject suggests to our recollection, for the purpose of leading our readers, by his superior knowledge, to precise conclusions, or of enabling them clearly to perceive the difficulties, and the objections. First, *Canker* and *moss* are often coexistent, and we believe *always*, when the first has existed long. Trees planted where they make a vigorous growth at first, that is, in a deep and friable surface soil, or planted incautiously *in pits* which have been excavated, and filled with prepared compost (in both cases supposing the *subsoil* not to be of a kind calculated to *sustain* this vigorous growth,) *canker* early, and before they are mossy; but moss will follow, and utter poverty, and death itself, in a period of ten or a dozen years; during which the produce is sometimes numerous, but always imperfect. Second, It is difficult to describe a subsoil in an intelligible manner, which is peculiarly calculated for healthy fruit trees, nor will all trees succeed equally on any: pear trees thrive admirably on a rich marshy soil, incumbent on gravel, with a pretty solid stratum of wet clay between them: apple trees thrive best on a rich marshy soil, having a deep subsoil of brown, moist and mellow sand, with a complete natural drainage. Third, Where the subsoil is unsuited to fruit trees in general, it should be trenched over two feet deep, a year before planting. Without doubt, in a state of health, trees throw off some *exuviæ* from the bark, some sorts much more visibly than others (as the birch, and some species of willow;) but if this be followed as a *law of Nature*, the cutting should be very superficial.—Our experiments were undoubtedly imperfect, but in the same orchard where most of the trees were good for nothing with canker and moss, we have planted others on the ground previously trenched, and they are doing well.—*Editor Farmer's Journal.*

ON THE SAME SUBJECT, AND ON THE TURNIP FLY.

Bromyard, May 29, 1821.

SIR,

I have to thank you for your early notice and insertion of my letter on the subject of "Barking Fruit Trees." Your opinion on the *eventual injury* to the trees by that operation, greatly coincides with my own observations. But as that has, from motives of prudence, been hitherto confined to a very narrow compass, as far as regards an operation apparently so hazardous, I look forward anxiously to some notice from Mr. Lyon, through the medium of your Journal, upon the success and *ultimate effect* observed by him to have followed the process; and I hope he will not disappoint this wish.

Your attention is now very laudably turned to the important subject of Turnip husbandry, and the means of preventing the ravages of the fly. The experience of an humble individual may not perhaps be unacceptable; and should the hints here thrown out lead only to further experiment they will not be wholly useless. Observation, in many parts of the kingdom, has satisfied me, that if any thing yet known will afford protection and security to the young plant, it is the operation of the ashes arising from burnt weeds, turf, stubble, wood, &c. I say the operation; for it is yet unknown by what means these ashes remove or keep off the fly, whether by the effluvia arising from them, or by any other quality disagreeable to the insect. That they have this effect, I am strongly inclined to believe. I have in several instances seen turnips, sown upon land which had been pared and burned, strong and vigorous, while these sown within a yard, upon land not so prepared, were wholly destroyed.—This has happened to myself. In two trials (the only ones I have yet made, on a small scale, I had plots of ground sown with Swedish turnips, which were absolutely swarming with the fly, whose attacks threatened in a day or two to annihilate the plants: over these I caused the ashes of burnt weeds and rubbish, wood, &c. to be sown or scattered. To my own observation it *appeared* clear, that the insect forsook the plants, which grew rapidly, and to a great size. A similar trial this year has, I think, saved a seed bed of Swedish turnips, which were strongly attacked. A friend of mine, long conversant with Turnip husbandry, assures me, that he would almost insure a crop of turnips by depositing in the drills, vegetable or wood ashes, and dropping the seeds immediately upon them. I am far from asserting that this mode, or that which I have adopted, are infallible: all that I am anxious for is, to invite your correspondents to the trial of so easy an experiment as either of them; and I think they will not be disappointed. With regard to Swedish turnips, I think failure need not very frequently occur: this plant is improved by *transplanting*;* and as a seed bed can without much difficulty be preserved, either by sowing *early*, before the fly appears, or by *shading it from the* sun (a method I have found very effectual, for the fly seldom either comes out or remains on the plants in the absence of *sunshine*,) a sufficient stock can always be kept for removal into the field in this method: at least this is my opinion; and I am anxious to have it either confirmed, or absolutely and *undeniably shewn* to be groundless, by *the experiments of others.* I am not quack enough to consider it infallible. I hope your correspondents will favour me with the result of their experience on this subject.

I remain, Sir,
Your obedient servant,
W. S. C.

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* *We think not; but transplanting is certainly a practicable mode of escaping the fly with Swedes.*—Editor London Farmers' Journal.

ON THE PEDIGREE OF SIR LEOLINE.

Stockton, May 31, 1821.

SIR,

As a further reply to your correspondent, who hides himself under the signature of *A Breeder*, I send you the following letter, which I beg you will insert in your next Journal; it is from a gentleman whose intimacy with the Messrs. Colling, and whose experience of their stock entitles him to possess the best informantion, and most accurate experimental knowledge of their comparative merits. He gives me leave to publish his letter, as the best answer to our anonymous foe.

I am, Sir,
Your humble servant,
JOHN HUTCHINSON.

TO MR. HUTCHINSON.

Marton Lodge, near Stockton-on-Tees,
May 31, 1821.

MY DEAR SIR,

I thank you for sending me a copy of the anonymous letter in *The Farmer's Journal* of Monday last, signed by "*A Breeder.*" It is evidently written by some person with a view to injure the stock descended from Lady, and particularly your bull *Sir Leoline.* I have an aversion to controversy; but, in the present case, as this anonymous writer has insinuated a *falsehood*, I think you ought to answer the letter. Lady, the dam of Major, instead of being out of a Galloway heifer, as this anonymous writer supposes, was out of *Old Phœnix*, the dam of Favourite, the sire of Comet. Old Phoenix was also the dam of Venus, and of Young Phoenix, the dam of Comet, and may be called the most celebrated short-horned cow that has yet existed. Lady herself was sold at the Ketton sale in October 1810, *when fourteen years old*, for two hundred guineas; and by a reference to the printed catalogue of that sale, it may be seen in what estimation the produce of Lady was held by the public. Two cows, the produce of Lady were sold for 610 guineas, and Major, the son of Lady, was sold for 200 guineas.

It is true, that the grandson of Lord Bolingbroke had some Galloway blood in him; and as Lady was got by this grandson of Lord Bolingbroke, she thence derives some portion of Galloway blood, although remotely; and I have yet to learn that this blood has been of any injury to Lady, or her descendants; for I can truly declare, that after having had some experience, during ten years, of different branches of the Ketton stock, I give the preference to the stock descended from Lady; and I know also that they are held in the highest estimation by Mr. Charles Colling, who was the founder of the improved short-horns.

I will not conclude this letter without distinctly assuring you, that my researches and inquiries into the origin of the improved short-horns, have led me to the belief that they are a *mixed breed* altogether, and partake not only of the old Dutch short-horned breed, but also of the *Kyloe* and *Norman breeds.* I have never thought them worse for the mixture, but improved by it. The only specimen of *Stranger* that I have left, is the heifer (out of Ruby,) the own sister of *Sir Leoline*, which I intend to keep as a specimen of the breed.

I am always,
Dear Sir, most truly your's.
BART. RUDD.

WARDROP, ON THE DISEASES OF THE EYE OF THE HORSE.

The anatomical structure of the eye we may pass over, since the timely application of remedies for occasional hurts, is nowise affected by it. In treating of the diseases, which common attention and little skill may relieve, and which require prompt relief to prevent worse consequences, Mr. Wardrop begins by considering *Simple Inflammation.*

"Inflammation, as it is the most common so it is the most important disease, in the Eye of the Horse. It proceeds or accompanies almost all the diseases to which that organ is subject, and it is the constant effect of injuries. The treatment of inflammation in the horse's eye must therefore be well understood.

"Simple inflammation of the eye is marked by striking symptoms. Though the inflammation be not violent, the animal keeps the eye-lids closed; the eye-lashes adhere together, from the secretion of mucus, which has become inspissated; the eye-lids are more or less swollen, their veins are distended with blood; and there is an unnatural flow of tears, which is more or less copious. When the eye-lids are opened, their internal surface appears redder than natural; the *haws* are inflamed and swollen; the white of the eye is covered with red vessels, and the corner, or horny coat, loses its clearness and lustre; a general muddiness, either affecting the whole of that tunic, or confined to one part, forming the commencement of a speck or film.

"It is usually accompanied by more or less general fever, marked by heat in the mouth, and thirst, loss of appetite, frequency of the pulse, unhealthy appearance of the coat, coldness of the ears and legs, with alternate heats and chills.

"Inflammation of the eye frequently succeeds injuries. It arises from colds also, and fevers, sudden chills after violent exercise; and like inflammation of all other organs, it most commonly attacks young horses, and those in high condition.

"*Treatment.*—Much depends on the first means which are adopted in the treatment of Inflammation; for if the disease does not receive a sudden check, the same decided measures cannot be adopted in all the future stages of the disease, the cure then becomes protracted, and the effects of the disease remain, which blemish, if they do not destroy the organ.

"The chief means to be employed to relieve inflammation in the horse's eye, are bleeding, purging, blistering, and attention to food and air.

"A copious evacuation of blood is the first thing to be done, and I would advise that the blood be taken from the neck, in preference to any vein in the immediate vicinity of the inflamed organ. The common opinion is, that the nearer the inflamed part from which the blood is taken, so much more effectual is the remedy. It will, however, be found, that although the inflammation appear immediately to subside by local bleeding, yet whenever the system is at all disturbed, blood taken from a large vein, or general blood-letting, is much more powerful in relieving the constitutional derangement, whilst it has an equal power in allaying the local inflammation. It will also be found, that if blood be taken from vessels in the immediate vicinity of the inflamed part, the irritation caused by the operation is generally considerable, and though the redness is relieved at the time, it very soon returns by the supply from the collateral vessels, which does not take place after general blood-letting. The orifice made in the vein should be large, and as much depends on the immediate effects of the first bleeding in all cases of inflammation, from three to five quarts may be taken, according to the violence of the symptoms. A second bleeding may be had recourse to, in from twelve to twenty-four hours, should the symptoms increase, or remain undiminished.

"At the same time the horse should be given a purgative ball, or what is perhaps the safer and more efficacious practice, a common purgative ball may be divided into three doses, and one portion given every four or six hours. This merely acts gently on the intestines, whilst by making the animal sick, it diminishes the force of the circulation; and it is not attended by the debilitating effects which often follow strong purging. Horses, indeed, whilst they can bear bleeding to a great extent, sink rapidly by purging.

"Nothing is to be done to irritate the inflamed eye; but it is to be frequently fomented with a decoction of poppy-heads, or camomile flowers. A second, or even a third bleeding may be necessary, to remove the inflammation; but these will be in a less quantity than the first, and are not to be had recourse to till a reasonable time has elapsed after the exhibition of the other remedies, so that their effects may be observed. After the acute symptoms have subsided, the eye generally continues more or less weak, and irritable, and the white of the eye remains red, though the vessels are of a duller hue. In this state, blistering the cheek and temple may be of service, but the blister should be cautiously and carefully used, to prevent any blemish. The vinous tincture of opium is also an excellent application, and may be applied by taking a camel's-hair pencil dipped in it, and then touching the ball of the eye once or twice a day. Saturnine and vitriolic lotions are recommended, and they may sometimes be advantageously employed, singly, or combined with opium. In some cases too, of old inflammation, where such remedies have failed, a seton put in the cheek has been useful; and in cases of this kind, a course of alterative medicines may also be given.

"It is of great consequence, in the treatment of all diseases of the Eye of the Horse, to pay attention to the air of the stable; for as this is often impure, it is proper to keep him in a well-aired place, and his head placed so that he shall not be annoyed with light, or obliged to stoop for food.

"With respect to food, the horse should have no corn until the inflammatory symptoms subside, but live on green meat or mashes.

"The practice of scarifying the eyes, is one which is seldom or ever necessary to resort to, and when not performed with great dexterity, the irritation created by the operation does more harm, than the blood taken away does good. The cruel practice of cutting out the haws, from considering it as a diseased growth, is much to be condemned, as not only useless but hurtful."

We have extracted nearly the whole of this article because it contains all the essential directions for hurts, cold, &c. which cause the eye to close and swell; these being the certain indications of blood-letting, gentle purging and cool diet.

"OF THE PURIFORM INFLAMMATION OF THE EYE OF THE HORSE.

"This inflammation of the Eye of the Horse, differs from that which has been described, in the part of the eye which is affected, as well as in some of the symptoms of the disease. In the puriform inflammation, the disease is confined to the membrane which lines the eye-lids and covers the eye-ball, called the conjunctiva, or mucous membrane; and its chief character is the profuse discharge of a puriform fluid. Besides the discharge of mucus, which is more or less mixed with tears, the eye-lids are very much swollen, and their edges glued together; their internal membrane is also swelled, formed into folds with matter deposited among them. The cornea appears depressed, from the swelling of the conjunctiva membrane on the white of the eye, sometimes forming large bladders, which the ignorant have considered as new growths, and conceived proper to remove. The puriform inflammation of the eye is generally the effect of cold, resembling the common catarrh, and it often spreads among all the horses of a stable; for like the same disease in the human body, if the matter touches a sound eye, it produces the disease.

"The treatment of this species of inflammation, is to be conducted on the same general plan as in that already detailed. The depletive system of bleeding and purging is to be had recourse to, and pursued according to the violence and obstinacy of the attack. The eye or eyes, for it usually attacks both, should be fomented with the anodyne and emollient decoctions, the animal kept in a well-aired stable, and fed moderately. When the more severe inflammatory symptoms are subdued, the extract of lead, undiluted, may be applied once or twice a-day to the eye with a camel's-hair pencil, in the same manner as directed with regard to the vinous tincture of opium; or a small portion of the red precipitate ointment, may be put between the eye-lids with a camel's-hair pencil, or probe, every second day."

ON THE ORIGIN OF TRASPLANTING TURF.

Acre House, near Caistor, Lincolnshire, May 31, 1821.

Sir,

Through the medium of your Journal, I beg to state my claim as the original inventor and practiser of the system of transplanting turf, which owing to my silence hitherto, has been attributed to another person. It is true that this person has made some considerable alterations in the mode of execution, as my invention for taking up the sods was a circular punch, about three inches diameter, with a common stilt handle, which I called a *graminator*. It may be recollected by some persons, that this implement was exhibited and recommended by me at Holkham, in 1811, and I humbly conceive, the plan which has been established by Mr. Blomfield, at Warham, was struck out by what I then suggested. I had used the implement, and had transplanted turf some years before; and in 1808 I wrote a small treatise on the subject, and the various modes of improving meadow and pasture land. To this some clerical friends contributed their kind corrections, particularly the Rev. George Holiwell, of Irby, and the Rev. Samuel Turner, of Caistor. From the former of these gentlemen, and from Mr. Raynes, of Overton, Notts, and Mr. Cremer, Land Surveyor, of Horncastle, I have obtained certificates as to the date and origin of the invention.

The importance of this practice is now extensively known, and I should, therefore, only take up your valuable paper by dwelling upon the subject. Indeed I should scarcely have thought of offering my claim to it, unless I had been urged by the entreaties of my friends to do so. In discharge of my obligations to them and to my family, I do in this manner claim to be the inventor of a practice, which, under the important patronage of Mr. Coke, is likely to be so highly advantageous to British agriculture.

By giving a place to this in your columns, you will oblige your's,

Most obediently,
GEO. WHITWORTH.

ON WHEELS, IN REPLY TO J. C.

June 8, 1821.

Sir,

I was in expectation the experiment I made would have sufficiently spoken for itself, and evidently shewed the superiority of strength in the conic over the cylindric form. Your correspondent *J. C.* is of a contrary opinion, and asserts, that it "can have nothing to do with the merits of either." I beg leave to ask, through the medium of your paper, if the spokes of the cylinder spring, and give way most, with less than one tenth of the weight upon them when the wheel is placed horizontally, they are not certain to spring and give way most, *when equally loaded*, and varying from an erect position? As they will not sustain one tenth of the weight when down, how should they *be able to resist the same blows* by the hurters, against the boxes, when at work? The strength of a wheel depends chiefly upon the binding; if this fails, it is immediately unfit for use. Your correspondent seems to be in part aware of this (although unwilling to acknowledge it,) by his construction of a kind of hermaphrodite wheel, which would have been a great acquisition before conic ones were invented. One other question shall suffice. Is a bended scantling, cut nearly with the grain, or a bended bar of iron, stronger to carry a weight with the back upwards, than the same substance if quite straight? and if any, how much is it stronger; that is, especially if the extremities are *bound*, or confined from springing endways? This is a question well worth considering, theoretically and experimentally, and should be well understood by every one that advocates the cause either of straight weels or straight axletrees.

I am Sir,
Your obedient humble serv't,
A Common Leicestershire Farmer.

☞ Our correspondent must be aware that recommendations of the kind alluded to in his postscript, are *advertisements.*—Edit.

ON UNDER-DRAINING.

Holkham, June 6, 1821.

Sir,

Your Editorial remarks upon the communications of your correspondents being so very generally well received, and so justly appreciated by your numerous readers, it will appear presumptuous in me to hazard a comment upon one of your notes inserted in this week's Journal. I am, nevertheless, induced to make the attempt, and I am quite sure you will accept my apology, when I plead a *sense of public duty* as my motive; for I verily believe if your note, attached to the Suffolk Farmer's letter on Under-draining, is allowed to pass current, it would be the means of misleading many inexperienced men, not only to their individual injury, but to that of the community at large. In the note I allude to, you say.

☞ "Unquestionably *large* stones should be broken to small angular pieces, *as for roads*, before they can be advantageously used for drainage."

Now, sir, I beg leave to differ from you in opinion on that point; for I say, that *all* large stones intended for drainage *should not* be broken into small angular pieces (as for roads;) and having made this assertion, it becomes a duty in me to support the same by practical definitions, so as to prove your system wrong, and mine right; and this I will now endeavour to do.

It is a very material, indeed an indispensible requisite, in setting Under-drains to leave a cavity for *the water to pass freely along the bottom of the drains;* that desirable object cannot be obtained *when stones are broken into small pieces, and thrown in promiscuously;* and a drain so filled, is any thing but what it is locally termed, a *hollow drain.* I allow that water will percolate through a body of small stones, and that it may be seen to run on at the lower end of a drain so filled; and hence cursory observers are led to believe, that it runs from the bottom of the drain; but that is an erroneous opinion, for the water does not run along the bottom of such drains; it rises and falls in its course according as it finds vacancies between the stones, or is obstructed by them. It generally stagnates a considerable depth in the drain, and not unfrequently rises in level, until it passes over the stones, and finds vent amongst the straw or brush-wood which covers them. A drain, surcharged as here described, does more harm than good, for the water stagnated in it saturates the adjoining land, and engenders disease in the plants which grow upon it.

Small stones are efficacious in draining land, when *properly applied:* they should be put on the top of drain tiles, or upon large stones, so placed at the bottom of the drain, as to leave a free course for the water *at the lowest level.* Ground springs are collected, and carried off by that means; and surface water washes between the small stones on the top, and drops into the cavity, or general conductor, formed by the larger stones at the bottom of the drain.

Stones of whatever size should never be thrown *promiscuously* into drains. The larger sized should be regularly placed *by hand* at the bottom of the drain, in the first instance; these should be backed or supported by others; *also placed by hand.* The smaller ones may then be thrown in indiscriminately, and the drain will be effective.

I have frequently been shown (by advocates of the small stone system) drains discharging water freely, which had been filled with small stones *thrown in promiscuously* a great many years before; but those instances proved nothing in favour of the system: they, it is true, proved that the water run out at the ends of the drains; but they did not prove that there was *no stagnant*, or, as it is called, *dead water* in the drains; neither did they prove, that the land through which the drains had been cut was effectually cleared from its superfluous water: quite the reverse; for I have seen the land wet and poachy in spots within a foot of the course of these drains; and that arising from the obstruction, and consequent stagnation of the water in the drains. The only way to convince a sceptic in these matters, is to fix upon a wet spot contiguous to a drain; there dig the earth away from the side of the drain; and if the water oozes out from between the stones, before you get to the bottom of the drain (which it certainly will do,) it is a proof the water does not find a free passage *at the bottom;* and that the stagnated water in the drain, is the cause of the damp observed on the surface of the land adjoining.

In an exposition of this kind, I was once told by the occupier, (who was a little prejudiced in favour of his system) that he made no doubt the water always did run at the bottom of the drain, until the vermin got into it, and damaged it. It is quite in vain to attempt to argue against the positions of such men; but as I address this letter to a gentleman possessed of a candid and liberal mind, I am not without hopes that my reasoning (weak as it is) will not only have convinced him of his error in recommending the small stone system of draining, but I even flatter myself he will become a convert to the practice I have recommended.

A very common excuse for omitting to underdrain wet lands is, "that materials proper for forming hollow drains cannot be found upon the spot where wanted, or at a reasonable distance from it." I have reason to believe that this excuse frequently originates from the inattention of the parties; for, in the course of a pretty extensive practice, and extended experience, I can safely say, that I have seldom seen any land in want of draining, but where materials of some sort fitting for forming hollow drains, may be found without much inconvenience: the fact is, materials of that description are not unfrequently overlooked; and I will therefore here enumerate some sorts of materials used for under-draining.

Drain tiles are only preferable to stones *six inches broad*, in so far as they require less care in placing at the bottom of a drain; for as that description of work is generally done by job, the contractors are not always so circumspect in placing the stones as the nature of the job requires. Black thorn, broom, and ling, are durable materials in drains; several other sorts of brushwood may also be used to advantage for that purpose. Though old turfs, whether used as wedge, or as shoulder, will last many years in strong clay. Twisted straw bands, put into narrow drains on clay land, have been found efficacious; but it is quite practicable to form effective hollow drains, upon strong clay soil intermixed (as it sometimes is) *with sand veins*, locally termed gauts or golts, without the aid of any other material than the subsoil dug out of the drains. As this method of forming hollow drains is new to some districts, I will shortly explain it. The drain is cut narrow, in the usual way; a round pole, about three or four inches in diameter, or a piece of board of the same breadth, and about six feet long, is provided; a piece of strong rope, or a drag chain, is attached to one end of it; the pole, or board, is then laid along the drain, and trod down horizontally; the clay subsoil is then put upon the board *a little at a time*, trod, and beat close by the use of a carpenter's rammer (such as is used for fixing gate posts:) this operation is duly continued until the drain is sufficiently filled, when the pole, or board, is dragged forward about five feet, leaving one end to preserve the end of the part completed; and the process continued as before described. This system is a great improvement upon the mole plough; for it is not only more permanent, and more effective, but it substitutes *manual labour* for that of machinery and horse power, and that is no mean consideration at the present moment, more especially as the drainage of strong lands may be effected in this manner at a very trifling expense: no carriage of materials required; and as the labourers *must be* maintained, it is not only more creditable, but more economical, to employ them in this manner, than to turn them upon the roads, where they not only feel degraded, but frequently do more harm than good to the roads.

It will be said, in objection to this method of draining, that the clay being rammed so tight on the top of the drain, will become impervious to wet, and prevent the surface water from filtering through it. But it should be remembered, that I describe the soil *a clay intermixed with sand veins;* these become conductors for the water; and even upon clay *without sand veins*, the surface water will soak through the cultivated soil, and find its way into the aperture of the drain from the sides thereof, so that, allowing the top to be impervious to wet (which in fact it should be, to render the drains durable,) the drain will still be efficacious.

Volumes might be written upon this very important branch of rural economy, and on the profitable employment of the superabundant farm labourers; but I fear I have already intruded too much upon your time and patience; and as I hope to have the pleasure of seeing you at Mr. Coke's Sheep-shearing, now near at hand, I will reserve what I have further to say on the subject to a future opportunity; and I therefore, for the present, subscribe myself,

Your humble servant,
FRANCIS BLAIKIE.

☞ We are very happy that our hasty remark has drawn forth so useful an explanation.—EDIT.

* * *

☞ IMPORTATION OF FOREIGN STOCK.

It is very much to be desired, that a particular account should be *preserved*, of every importation of valuable stock from abroad; and that those in whose hands they fall, should keep a *register* or history of them, to show their pedigree—noting such as die, and their diseases—their increase—their age—the disposition made of the progeny from time to time, and the persons to whom sold. The time is approaching when the pedigree of improved neat cattle will be traced with as much care and accuracy as have hitherto been those of *Blood Horses.* This is already the case in England; and we hope the importers and owners of good stock in America will attend to it:—To do this it is indispensible that every animal should have a *name*, else how can the progeny be traced up to the progenitor? Premiums, especially, should never be awarded to Cattle, without attaching to the object some specific name—because the taking of the prize gives *character* to the beast, and stamps a value on its progeny; to secure which, and to prevent obscurity and confusion hereafter every one should bear a distinctive *name.* In England, the bulls Hubback, Comet, Denton, Aid-de-camp, &c. and their families are as well known, and may be as definitely traced, as those of Flying Childers, Eclipse, Canon Ball, &c.

We should be much gratified, and believe that we should be rendering an essential service to the agricultural community, if all persons importing stock, or having a knowledge of such importations, would give us as minute an account thereof for record in the Farmer, as the cases will admit of.

CATTLE.—As to these, we have published in this Journal all the particulars we have been able to obtain of recent importations. Those in Kentucky (except Mr. Clay's which we hope soon to get.) The Alderney brought here by Mr. Creighton, of which the statement is exact.

The Coke cattle, or North Devon, improved by him, and presented to Messrs. Patterson and Caton: and the improved Short Horns, imported by the Editor, now the property of Col. Lloyd, and *we ask it as a favour of our friends in New York, Massachusetts, and other states, to furnish us with a statement of such improved stock, as have been imported within their knowledge*—every intelligent reader will perceive the use and value of such memoranda, being recorded in a tangible form, within the reach and reference of Farmers in every state and territory in the Union—as are now the volumes of the American Farmer.

BROADTAIL SHEEP—From the mountains of Tunis—with respect to the introduction of this race of sheep, the following account is given in page 8 of the preface to the 1st vol. of the mememoirs of the Philadelphia Agricultural Society.—EDIT. AM. FARMER.

"We owe the introduction of the Barbary mountain sheep, with broad tails, to our gallant countryman, William Eaton, who, when consul at Tunis, sent them in an armed vessel in the service of the United States, commanded by Henry Geddes, to Timothy Pickering then secretary of state, who presented a fine ram and ewe* to the president of our society, from whose disinterested zeal, this valuable breed is now spreading through the state of Pennsylvania, and other states in its immediate vicinity. The wool of those sheep, owing to their health and vigour, does not fall off, like the fleeces of those meagre and degenerate runts, which are too frequent here; it is moreover, in general, of a good staple, and next the skin, peculiarly soft and furry. The weight of the sheep is above mediocrity, but their chief excellence arises from their hardihood, and disposition to fatten speedily; a quality they possess in a remarkable degree, which causes them to be highly valued, both by the grazier and butcher. Hatters who are acquainted with it, prefer it, for their manufacture, to any other wool. It spins free, and to any fineness. Glossy, fine and well dressed cloth, has been made of it. Those who have worn fleecy stockings, and gloves, of this wool, speak of it with great approbation. Perhaps a cross with the *Merino*, would benefit both."

ALBANY, July 17.

CIRCULAR.

Sir,—The General Committee of the Board of Agriculture are preparing to publish a second volume of Memoirs. The materials furnished by the County Agricultural Societies are very scanty; and as the General Committee are desirous of promulgating, through this volume, the experimental knowledge of our best farmers, they respectfully and earnestly solicit you to aid them by communicating to the Recording Secretary, any experiments, observations or facts, which have come within your practice, or fallen under your notice, and which you may deem calculated to extend the sphere of agricultural knowledge. A compliance with this request, by gentlemen to whom this Circular is addressed, will enable the board of Agriculture to fulfil a primary object of its institution, in laying before the farmers of the state, a mass of practical information, adapted to our climate, our productions and our habits. It is by promulgating the experiments and observations of comparatively, a few good farmers, and thus rendering a knowledge of their practice accessible and familiar to the many, that agricultural improvement has advanced so rapidly in Europe, particularly in Great Britain; and it is by like means we can best facilitate its progress among ourselves. The satisfaction of contributing to so useful and laudable an object, will render unnecessary any arguments, on the part of the General Committee, to stimulate you to action.

The General Committee request, that in any communications which you may make in pursuance of this request, you will endeavour to be concise and perspicuous, and that on subjects relating to tillage, the condition and nature of the soil, price of labor and manure, method of cultivation and product, and valuable breeds of animals, may be particularly noted. Communications may be made any time previous to the first day of November next, though it is desirable to receive them as much earlier as possible.

A resolution has been adopted by the General Committee, to present a copy of the volume to every gentleman who furnishes useful contributions; and the Recording Secretary will be instructed to fulfil their wishes on this head. By order,

STEPHEN VAN RENSSELAER,
President.

J. BUEL, Rec. Sec'ry.

LONG WOOLLED AND BROAD TAILED SHEEP OF AFRICA.

The Hon. DUDLEY L. PICKMAN, of Salem, has presented to the Massachusetts Agricultural Society a Ram of this breed, just imported.

A Ram and Ewe, the first of the race introduced into this country, were presented by Gen. EATON to the Hon TIMOTHY PICKERING, then resident in Pennsylvania, by the name of the Barbary Mountain Sheep. The President of the Philadelphia Agricultural Society some years afterwards, gave the following high character of the breed, in the memoirs of that Society:—

"I know not any breed of sheep superior and few equal to it. Its fleece is of the first quality; and the valuable parts singularly good. No other African Sheep is to be compared to this species, either for fleece, fattening, or hardihood. It bears our severest winters without shelter.—Some of the best lamb and mutton sold in our market are of this breed; which is now spread through many parts of this State and Jersey."—(Memoirs vol. I. page 163.)

General notice is hereby given to the Farmers of Massachusetts, that the Ram now at E. HERSEY DERBY's, and at the disposal of the Trustees of the Society, will be delivered to any gentleman who is desirous to obtain a cross from this breed, free of cost, and upon the sole condition of good treatment of the animal, and to be kept within the state. Application to be made *immediately* to either of the subscribers.

E. HERSEY DERBY, *Salem*,
JOHN PRINCE, *Roxbury*.

THRESHING MACHINE.

A Mr. Pope, of Hallowell, (Maine) advertises a threshing machine, price $20, by which a man and a boy can thresh 50 bushels a day. His advertisement has been answered by a Mr. Seth Ballou, of Livermore, who produces a certificate to prove that he has invented a machine for "threshing, sifting, and winnowing, wheat, rye, oats, and all kinds of small grain; also, grass, flax, and all other articles from which the seed may be obtained by threshing, at one operation," by which three men to turn the crank, and two other persons, one to feed the machine at the hopper, and the other to take away the straw, have threshed and winnowed more than five times the quantity ascribed to Mr. Pope's machine.

FROM THE EASTON GAZETTE.

The Committee of Arrangement of the Maryland Agricultural Society, who have lately received their appointment from the proper authority, held their first meeting on Tuesday last, in this Town. We understand they organized, and made very considerable progress in deciding on the objects most worthy to be proposed for premiums, and that they will very shortly lay them before the farmers, breeders, and manufacturers, eager and emulous to enter the lists.

* * *

Extract of a letter to the Editor, dated "MILLEDGEVILLE, (Geo.) 16th July, 1822.

"Crops of corn and cotton are very fine in this section of the Country; our crops of wheat have failed."

THE FARMER.

BALTIMORE, FRIDAY, AUGUST 2, 1822.

The index is finished and will be made up as soon as the papers are sent. The bulk was too great to send by the same mail.

☞ MISTAKE CORRECTED.—The fine prize Jack, Don Carlos, advertised for sale in a former paper is not a Maltese, but a *Spanish* Jack, bred in Majorca, and was *five* years old last spring, for price enquire of W. F. Redding, office of the American Farmer, over the Post Office.

TURNIP SEED.

A few pounds of imported Aberdeen turnip seed have just been received, and for sale by WILLIAM F. REDDING—and farmers will do well to try it; for this turnip, known to some as the yellow bullock, or Scotch yellow, is a very sweet flavoured, yellow fleshed root—keeps better than white ones, and quite as well as the Ruta Baga.

PRICES CURRENT.—CORRECTED WEEKLY.

White wheat 120 a 125 cts.—Red, do 115 a 120 cts.—White corn, 65 a 67 cts.—Yellow, 62 a 65—Rye, 50 a 55 cts.—Oats, 22 a 25 cts.—Wharf flour $6 25 a $6 37, cash—other articles same as last report.

The Editor of the American Farmer is informed that "five hhds. of tobacco were sold by Thomas Hammond of Frederick county, on 26th July in the Baltimore market as follows: 2 hhds. at $25 50—2 at $23—and 1 at $6 75—weighing together 3685lb. grown on three and a half acres of ground; average price per cwt. $22 61 and yield per acre $238,"—We understand one hogshead made in Frederick sold last Saturday for $36 per hundred.

Fine spangled tobacco, $18 to 25—Fine red, do. $10 to 15—Good do. $6 to 8—Common, do $2 50 to $5—Seconds, $1 to $6.

Wants a Situation.

A middle aged man with a small family. The Editor of the American Farmer, from personal knowledge can recommend him as being an honest, sober, industrious and intelligent man, qualified to take charge of a farm and to keep a clear account of all its transactions. He is a good gardener and well acquainted with grafting and managing fruit trees. His wife is one of the most cleanly and judicious managers of a dairy to be met with, and both of them very domestic and of excellent moral character. For further particulars enquire of W. F. Redding, office of the American Farmer, over the Post Office, or of the Editor.

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* *How many were received, and were any sent into other States?—EDIT. AM. FAR.*

AGRICULTURE.

ADDRESS

Delivered by Col. Thomas Emory, *to the Agricultural Society of Queen Ann County, Maryland ; and now published by their desire.*

Gentlemen of the Society,

While hesitating in the performance of your demand, I could not forget the great injunction, "*never shrink from duty*," which should govern every man, in whatever situation he may be placed, either by the allotment of Providence, or the suffrage of friends; but when I reflect on how little can be said upon the usual topick, that is new, interesting or instructive, after what has already been advanced in the numerous addresses which have poured in from all quarters—from not only the first farmers, but the first statesmen and literary characters of the nation, I become sensible of the difficulty you have laid me under.—Eminent men, with President Madison at their head, have led up the genius of our art, and placed her upon that lofty eminence, on which she ought long ago to have been seated. In their course thither, they have strewed the path with some of the finest flowers of eloquence ; the distinguished virtue, happiness, and independence of the Farmer's vocation, and the utility which flows from our societies, have received at their hands, a coloring so just, that I shall not presume to retouch these subjects.

Be it then my painful task to range through the briery field of *our* agricultural errors, for it is too true that every district has *its* faults and that *we* are exceedingly deficient in good agriculture, and its necessary essentials, industry and economy. I wish it were otherwise—but in this point of view, an immense volume of materials opens before me : yet, whithersoever I turn, nothing but difficulty presents itself ; for on the one hand, I must avoid repeating what has been before sufficiently enforced ; and on the other, things ought to be said, which it seems impossible to compress within tolerable limits.

It is always easier to swim smoothly with the current, than to resist it ; not being unambitious of singularity, opposition takes from the pleasure of a contrary course, although I am persuaded that it may be the true one.

In the course of my remarks, I must on some occasions, venture to oppose theories, which are in this day popular ; but I do not flatter myself with the expectation that my temerity, in doing so, will escape the criticism of those whose notions have been derived from others, or from books.—Nor do I hope that my opinions will be swallowed by any as dogmas. Nor do I mean to urge, with a view of giving them extraneous weight, that they are the result of twenty years of experience and observation : I only ask, that they be received for so much as reason and experience may prove them to be worth, and no more.

I shall, First, endeavor to point out some of the errors in our habits and practice, which prevent better farming:

Secondly, presume to recommend that system, which appears best calculated for our present circumstances and situation, and

Lastly, offer some remarks on the particular section of country which we occupy.

1. It is obvious, that one of the most prominent and universally acknowledge impediments to improvement here, is the large and unwieldy size of our farms. This, together with the consequent poverty of the soil, are topicks upon which the changes are perpetually ringing. But happy indeed should we be, if all our impediments were as easily removed as that! Few men have it in their power to enlarge their farms at pleasure or from caprice, and when we advert to the fact, that every man may by selling or leaving out of tillage, or planting in trees, reduce the size of his farm to as narrow limits as he pleases, this great objection vanishes in an instant.

The system pursued here, when a large farm is in any manner acquired, is well known. It prescribes, and an almost universal consent enjoins, that the occupant must till one third in corn, and one third in wheat annually, at all hazards—force or no force—capital or without capital—manure or no manure ; and then in the event of failure, which happens almost of course, we hear "large farms," "poor land," and "rigorous seasons" denounced in full chorus. Here gentlemen, I conceive lies the great source of all our bad management, and, as we have the means completely within our power, let us lay the axe to the root, and with a manly decision extirpate it at once. We should mark out, and confine the plough share strictly within those limits, which we are able to work thoroughly and well ; and with the same force raise, collect and apply the manure which the resources of the farm, and good management will afford. Let us proportion our fields exactly to our labour, capital and sources of manure ; and the longer they lie, after such tillage, under grass and judicious grazing, the better. It must be kept constantly in view that here, it is not our object to enquire as it is in Europe, how a limited quantity of land can be most advantageously *cultivated* by an unlimited command of labour ; but how an unlimited quantity of exhausted land, is to be best *employed*, with limited labour, and limited resources, by a thin population. And it will be recollected, that in a country where there is so much choice, nothing contributes more to filling up the population in a particular district, than its being rendered desirable by the progress of improvements.

If the farm is really too large for one establishment ; or the quality of the soil such, that it is not worth the expense of improving ; a part of it may be more profitably turned out of tillage, and planted in standards of yellow pine, at the distance of 100 yards each way. These must be defended from our live stock for three or four years ; and in fifteen or twenty years the whole area will be set, in defiance of every thing but the axe and grubbing hoe, in this inexhaustible species of tree. If the outside fence be preserved for the same period, the still more valuable locust and chesnut may be intermixed with the pine.

I beg leave here, in the outset, to protest in decided terms against that opinion, which graduates the goodness of a farmer, by the amount of crop which he raises to the hand, or to the team. It is an opinion fraught with the most pernicious error, that saps the very foundation of improvement : he, alone, who makes the most crop from his acre, and improves that acre, is on the road to agricultural improvement,—the man first mentioned might be widely diverging from that end.

2. It may be regarded as a singular error, that while large farms are almost universally objected to on account of their size, when permitted to fall into decay, or are to be devised, and always when offered for sale ; that there should be yet a considerable proneness in large land holders to consolidate several small farms into one. From whatever motive or feeling this disposition may arise, it is on the present occasion unnecessary to inquire, very critically ; as we may safely assert that it in part proceeds from a belief that large farms ought to be the most productive, If I mistake not, the two celebrated farmers, Col. Taylor and Arthur Young, have both some where expressed the opinion, that about 1200 acres form the best sized farm. In the hands of a few superior managers, such as these gentlemen themselves were ; men who have capacity to plan, and industry and energy to execute on the large scale, this may be true ; but in the hands of the generality of men, such domains would, from their great size, be found perfectly unmanageable.

On this Shore of Maryland, the evils resulting from large farms, and large and expensive buildings, need scarcely any illustration. In England, the recent rage for throwing several small farms into one, or into an extensive sheep-walk, has inflicted a degree of ruin on their small Tenantry, *the bone and sinew of that and of all other countries*, which it will take their Board of Agriculture ages to repair. In that country, the creation of large farms however, and their corresponding princely mansions, does not only minister to the comfort and luxury of him who raises them, but in succession, to one branch of his posterity also ; for the opinions of the people, generated by their form of government, approve and their laws of primogenture and entail protect them. Hence, they have reasons for augmenting estates and creating mansions which do not, and which cannot exist in this country.—Here, we have long since consigned the very relics of those unjust and unnatural laws, to the "tomb of all the Capulets." Yet our *habits* have not sufficiently changed, nor kept pace with the wisdom of our legislation. Costly and splendid establishments are still sometimes projected by us, although we have not those auxiliary and legal props for their support, and often see them cut up and scattered to the winds at the demise of their projectors! or, falling into that rapid dilapidation, which is only outrun by the more rapid ruin of an orphan family.

The injury to the State caused by this waste of citizens, who might have been useful members of society but for the habits of expense, generated in such establishments and entailed upon them when the means of support could not be devised, is a matter which the farming interest may well deplore. For, every cause which tends to paralize productive industry in the individual, or to produce unequal division or involuntary alienation of farms, is destructive of system, and consequently operates as a serious impediment to general improvement. I therefore conclude that the projector of a farm, whether he be rich or otherwise, does wrong if he allows it to exceed about 300 acres of cleared land, unless it be under very peculiar circumstances.

There is, as I have understood, a plan for the transmission of landed estate, "*the borough English*," which obtains in some parts of New England, that is well adapted to small estates, and may be considered a happy improvement upon the reasons which probably suggested the feudal method ; for while it promises undivided perpetuity of the estate in one branch of the family, it ministers effectually to the benefit of the whole for a long period. It is this, "to devise the only farm—or the best farm, to the youngest son, during whose minority, the rents and profits accrue to the whole family of children, equally." The wisdom of this plan seems obvious and in no point is it more so, than as a preventive to the expectancy of a fee simple right in a few hundred acres of unimproved land, which very often creates a *dependance* that unnerves a young man's enterprize, and paralizes his exertions, more frequently than it produces for him any substantial benefit.

3. Another error may be found in the unprofitable objects towards which our emulation is directed. The Deity has wisely implanted this feeling in the bosom of man, in order, that when directed to useful and liberal objects, it may sub-

serve the social, as well as the individual interest.

If it be asked, why is the Pennsylvanian a better farmer than the Marylander? Is not every man, who is acquainted with both, ready at once to give the answer?

The Pennsylvanian depends upon his own farm to furnish his wardrobe and his table—instead of considering it a disgrace, he glories in wearing his own home made clothes and in guiding, himself, his own noble team. Nor does he consider it disgraceful, when necessity or inclination prompts him, to be found at work by the side of his servant. He does not spend his crops before they are made, but keeps himself out of the clutches of merchants, and of course is not held by *them*, as our farmers are, under perpetual rack-rent.—If, therefore, we mean to compete with the Pennsylvanian, we must first revolutionize our opinions and the fashions of the day; we must cease to vie with each other, in fine raimnent and costly equipages. The best improvements, the best crops, the best live-stock, are the most rational objects, after mental improvement and the social virtues, towards which our emulation can be directed. Can we, gentlemen, avoid bringing our own infatuation after costly carriages, as one item of unwarrantable expenditure, directly home to our own doors? when we are compelled to acknowledge that whilst there is in the town of Centreville two extensive shops for carriage making, the proprietors of which are making fortunes by the sale of splendid and expensive vehicles, there was not one shop till the beginning of the past year that could in the whole county, afford a tolerable cart or plough! These necessary implements, we have heretofore postponed getting till we could no longer go on without them, and then our money was *sent off* to Baltimore, Elkton or Wilmington to bring them to us, months after they were wanting!

Even now look around you, and what farmer is there that has carts enough to collect and get out one fourth of his manure? about one in fifty! How many that have not one or two expensive pleasure carriages? not one in five! It may be recollected that a Gig lasts no longer than a cart, and with the $300 which it costs, you might buy six first rate carts; enough, of these, for two common sized farms!

Upon a reference to the United States late collector's books, it appears, there were at the last enumeration about 500 pleasure carriages in this county, and the same number in Talbot; and although every man is entitled to vote who has age and residence, there is not a greater number of voters than 1500 in either of these counties. This statement, gentlemen, then shews the very singular fact, that there is one expensive pleasure carriage for every three grown males within these counties, and that all may ride, at the same time, to the poles in carriages!! a fact, which I will venture to assert, cannot find a parallel, in any agricultural section of our country, nor in any other part of the world. A farmer in Europe whose capital would here entitle him to be considered rich, does not even dream of allowing himself the luxury of a vehicle of this description. Our fine *natural* roads first, perhaps, betrayed us into this indulgence; which, while an evidence of our imprudence, illustrates the happiness attainable under an admirable government, that leaves us comparatively exempt from taxation, and at liberty to enjoy our resources in our own way.

Let us pursue the parallel a little farther and inquire, why the Marylander is inferior, as a farmer, to the New Englandman, who availing himself of all the motives and advantages of the Pennsylvanian, also feels and enjoys others. The youths of New England are early taught to observe the advantages which accompany intelligence, morality, industry and economy; and they are particularly impressed with the necessity of useful acquirements, to make their way in the world—which is not to be done, by the respectability of parentage, nor the prospect of an heritage, but by the power of *their own* exertions. They are sent to school early in life, and are well educated. No idle period is allowed afterwards, between childhood and manhood—to acquire incurably bad habits, either of indolence or vice. Neither the idle office, nor the more idle compting house are ever resorted to there, as the slippery stepping stone, merely to fill up this period.

If he is not fully prepared to enter upon the study or practice of the profession he is *destined* to pursue, a charge of scholars at this time, unites the benefits of giving him habits of attention to business, of advancing his own improvement, and of rendering him at once, a citizen, useful to the community. If he is intended for a learned profession, *fashion* makes it disgraceful for him to neglect his studies, and the same consideration, compels him to practice his profession after having acquired it. Is he intended to gain his bread by the plough, or to improve the residence of his fathers? he is clothed in substantial, domestic fabrics, and grasping the handles of that invaluable implement, he is early and *sufficiently instructed* how to use it. But we, who know that all other trades and professions require an *apprenticeship* seem to believe that our most difficult art requires none? How absurb and how ruinous is such a conclusion!

Do we listen to the suggestions of indolence and ignorance? they tell us that the Sun is here too hot for the white man to labor in the field, without melting down his constitution. Idle pretext! its refutation is given by the Watsons, the Crips, the Potts', our neighbours, who to their credit were from their infancy brought up to labor in the field. These families of men are as healthy, athletic and robust as any climate under the sun can boast of having produced.

The generality of our labouring white men do not provide the necessaries essential for their families; and as to comforts, they seldom dream of them:—a large portion of their earnings is spent for whiskey, which enervates and demoralizes them. Every clsss of the community should discountenance and reprehend this growing evil.

4. Another error, immediately in connexion with the preceding, consists in our dependance upon the Stores, for almost every thing we wear, and much of what we eat. The flimsey fabrics of Europe take precedence in our esteem, over our own more comfortable domestic; and the more wholesome produce of our dairy gives place, to the effeminate and costly luxuries of the "farthest Indies." Who, amongst our agricultural brethren is there that, has shunned these broad based rocks, that is not now an independent farmer? And, who that has moored by them, that has not finally been stranded by the flow of debt?

I agree with the friends of the tariff, "that a change must take place in the policy of the country," or rather of the citizens individually.—But this change must be wrought by the voluntary determination of each family to rely upon its own internal resources, and not by imposing additional taxes, on one class of citizens to support another.

This tariff question, about which so much feeling and so much interest has been manifested—in which it has been thought so difficult to draw the discriminating line between *national* interest and independence, and individual oppression and injustice, this great question has lost much of its interest since the secretary of the United States treasury has shewn by his late report, that the exports exceeded, for the last year, the imports, by two millions four hundred thousand dollars.

The late wars in Europe have, by affording us enormous prices for produce, led us into habits of expense and large calculations on prospective income, which we must lower and graduate, at once, to the scale of peace and reason.

Although the last war in Europe was conducted ostensibly to preserve the balance of power, it has been concluded by leaving as great a preponderance on one hand perhaps as ever before existed; and, although the disposition to reform is evidently on the slow but steady march, yet we should not calculate that wars of reformation will again be undertaken, or be of long duration. Within the last thirty years, the people of Europe have gained much experience; when they are ripe for them, changes will be effected as they have been in Spain and Portugal, without much bloodshed; and when this state of maturity reaches Russia, then most probably we shall see "the light of liberty and reason enabling nations to settle their differences in a more civilized way than by appeals to arms." When governments, generally, become reconstructed upon just principles, there must necessarily be a partial if not a final end to wars; for the interest and ambition of rulers—fruitful sources of hostilities, will be made to succumb to the general interest!

"War is a game which were the subject wise,
"Kings would not play at. Nations would do well
"To extort their truncheons from the puny hands
"Of heroes, whose infirm and baby minds,
"Are gratified with mischief; and who spoil
"Because men suffer it, their toy the world."

The opinion, held by too many persons, that the storm of war is at times essentially necessary to purify the political atmosphere, however popular it may be now, will then be applicable only to despotisms, and not to people whose governments are founded on sound principles.

Is it not better that we should calculate on a continuation of peace, and limit our expenses to meet the consequences; rather than that we should hazardously continue expenses beyond our income, in the vain hope that wars in Europe may ultimately afford us relief? Disappointment in the former calculation will be gain; but in the latter ruin!

5. Another error may be found, in the disregard which our farmers manifest, towards the advantages derivable from a division of labour. For the greater convenience of overlooking them, it is a general practice to keep all the hands employed together, at the same job; but this should seldom be permitted from the time we finish harvesting our corn, until the vigorous growth of summer crops demands the quick working of them. By this error, we have much of our work badly done, and we entail awkwardness on all our hands. By this too, unless the eye of the master is constantly upon them, responsibility is lost in the multitude, and we cannot detect him who slights or neglects his work.

We should systematically make some rough carpenters, sawyers, some axe-men, ditchers, fence-makers, cartmen, diggers of manure, &c. To such persons as may not have tried it, or may doubt the advantages of this suggestion, I would for an illustration, refer them to what Dr. Adam Smith says in his first chapter on the wealth of nations, respecting the manufacture of the insignificant article, the pin. They will there find that to make pins on the most economical terms, eighteen distinct workmen are required! they will there find demonstrated, that "the economy of labour consists in the division of labour."

Every intelligent farmer who has had any experience in the matter, will there see what the Doctor (who was no farmer) did not acknowledge—that his calculations are applicable to farming, as well as to other kinds of business.

In speaking of the economy of agriculture, Col. Taylor says "that foresight is another important item." That "it consists in preparing work for all weather, and in doing all work in proper weather and at proper times." This single paragraph of that distinguished farmer speaks a volume of instruction.

6. That there is no rule or general understanding concerning the proper depth of ploughing our Eastern Shore land, cannot but be regarded as another impediment to our improvement. It is to be regretted that we have had no writer to lay down general rules upon this point, which might anticipate that information, which we can now only acquire by an experience of many years. Mr. Bordley, the only writer we have had, is net satisfactory on this subject. Judge Peters has somewhere said "that he had understood that the land on this shore would not bear deep ploughing." This is unquestionably the opinion of all practical men with whom I am acquainted. It is believed, that though you may make one or two superior crops after such ploughing; yet without the land is at the same time manured, the mould in consequence becomes poorer, instead of deeper and better. It is also the decided opinion of a large majority of those farmers, that our light lands, not only do not derive benefit from fall or winter ploughing—but that they receive from the rains or other causes, positive injury. These may be regarded as peculiarities in our soil, if farmers in some other places are correct, which it would occupy me too long to attempt to explain: might it not be a subject worthy of the united agricultural interests of this peninsula, to cause an agricultural and geological survey to be made of it, and to have *its real peculiarities noted by one competent to the task?* I think it may be safely laid down as a rule that the depth of our ploughing should always be regulated by the depth of the mould, and that we should never turn up much of the substratum, unless we intend at the same time to dress it with manure, and even then, but gradually and sparingly.

In the application of manure, it may also be laid down as a rule, that it should not be laid on, until the land has been thoroughly broken; and then be harrowed or ploughed in lightly, that it may be *near the surface* all the season.

The advocates for turning manure in *deep*, fancy they silence all objection, when they argue, that manure being a lighter substance, cannot sink into the earth, or heavier body. But these gentlemen forget that manure has to undergo solution, before it can be fitted as food for plants. Even plaster of paris, one of the hardest of our mineral manures, is said to be soluble in 500 times its weight of water, and it is believed to be through the medium of this universal menstruum, that ponderous substances are carried up into the organs of plants. Whether, therefore, in a state of solution, manure will more readily sink, or evaporate, requires no argument to shew; and it is my opinion that it had better be left *on* the surface, than be turned *below* the mould.

7. Of the many errors which prevent good farming, *naked fallowing*, many years of observation have induced me to rank among the foremost. This error, unlike most others, is not the effect of neglect or want of effort, but proceeds from an overstrained and misguided industry, which impatiently destroys the goose in order to get her golden eggs; or which seeks to reap greater profits, and quicker returns than it is in the nature of landed estate to yield. To keep up heavy returns, the improvement of the soil, must be commensurate with our efforts to raise the crops, and they must proceed *pari passu*, and without relaxation.

From my limited range of reading, it appears that the old English writers were advocates for naked fallowing, merely as a cleansing crop. In the same limited course, I have not met with any modern writer who is a decided advocate for fallowing, although Sinclair informs us, "that a very spirited controversy is at present going on, in England, between fallowists and anti-fallowists." Many of their best writers however, express emphatically their regret that they cannot find a suitable fallow crop to precede the wheat, but recommend turnips for the purpose. Thus it is to me a matter of wonder that any American, who can avail himself of either corn or tobacco for this purpose, could for a moment think, if experience had not furnished any lessons, of permitting *naked fallows* for wheat to enter largely into his system, if at all. In England, climate forbids the culture of corn, and circumstances forbid tobacco. It will be remembered too, that in that country, the climate is a very moist one; whilst ours is dry. Its sun is much less vigorous and scorching than ours, rendering *smothering and shading* crops, less essential in rotations, than they are in ours.

The *exhaustion* occasioned by a naked fallow, I have for many years considered greater, than what is produced by the corn and wheat crop *both*; and in this opinion, I have been fully confirmed by repeated observation, and by the remarks of several very *experienced* men, in whom I have high confidence. In looking for the reason why it should be so, I must confess the cause has seemed inadequate to effect.

But if we cannot reason in favour, there is no reasoning against matters of fact.—Indeed all the reasoning which I have been enabled to frame on this point, is predicated upon a denial of the opinion that the earth *derives* manure from fine tillage, and direct "exposure to the sun and atmosphere; an opinion grown venerable since the days of Tull, and which has been handed down, by strong advocates, to those of Gen. Beatson, in the present time. This opinion I have long had the presumption to doubt, for it appears to me opposed to experience, and also to that *more* rational plan of melioration, which rests its claims exclusively on the fertilizing effects of shading and smothering crops, interposed between exhausting crops in severe rotations. I say *more* rational, because neither, nor both, of these plans for fertilizing, will ever make a poor farm rich. We have innumerable instances of lands made poor by fine tillage, and exposure to the sun and atmosphere; but no instance, where they have been made rich *without manure*. Yet fine tillage is essential, to open facilities for the roots of plants to shoot; for the soil to *give off* its manure, and for the sun to destroy existing animal and rival vegetable life. So, also, is the atmosphere essential, as well for the vegetable as for animal life—but, for its different qualities. Need I recall your recollection to the fact, that many of our best farmers, some years ago, adopted the five field system *with clover*, in which one field was annually fallow ploughed for wheat, thus putting two fifths in wheat; that for a few years they made prodigious crops of wheat; that at last, they scarcely raised enough surplus wheat to buy the deficiency of corn necessary for the consumption of the farm; and that they have all without exception *abandoned* this system! Another fallowing system, by means of four fields, in which clover is discarded, is now with many becoming popular, and it requires no power of divination to predict, that its like result must be more rapid, as its operation is more severe. We may be flattered with very superior wheat for a few years, but at last a sense of our error will forcibly overtake us, and yet always find us willing to refer our failure to hessian fly, to frost, or any thing but the true cause—exhaustion. I would therefore liken a man who fallows *systematically* without manuring, to one who draws all his money out of the Bank, at one or two checks, to spend it; and he who manures his land, and then leaves it to rest under grass, unto him, who annually invests a part of his income to produce an interest, at more than compound rates.

When plaster of paris was first introduced in Pennsylvania, the German farmers shunned it, because they thought from its then supposed *stimulating* quality, "that it would make rich fathers and poor sons." Since then, they have been zealous in the cause of making their lands rich, by plastered clover lay for fallow, without any other application of manure. Those, who have thus relied, have been disappointed; and they are now referring their failure to the plaster, and suppose that it has been injurious, because it ceases to act and the clover ceases to flourish. But, I would point the attention of those gentlemen to their great fallow system, and say, there is the greatest cause of all your disappointments!

That the clover crop, every where, fails to reproduce continued crops equal to the first, is now a known fact, but I think it is the effect of a cause, novel at least in the suggestion, and which I shall on some other occasion endeavour to explain. That the plaster should refuse to do its good offices, and even produce injurious effects, when applied after the land has already received as much of that ingredient as it requires, is neither peculiar nor uncommon. All the manures and ingredients of a good soil, with which we are acquainted are capable of producing the same effects.

The hypothesis, of Sir H. Davy as to the *modus operandi* of plaster, would be perfectly rational, could he shew, that the land on which plaster will not act, has already *too much* of that necessary ingredient. Indeed, when we see the wonderful effects of so little of this substance, it does not require a very pliable credulity to stretch into the belief, that it might be easily overdone.

8. Another error very fatal to the improvement of our land, and profit of our live stock, is our almost total neglect to cultivate artificial grasses, and an equal neglect of those which are natural.

Indeed, so far are we from promoting the vigorous efforts of the invaluable grasses of the *Poa* class; which nature, as if out of patience, seems in her bounty determined to force upon us, that we are in the habit of denouncing them as, next to the hessian fly, our deadliest enemies, and of exercising our best, but misapplied skill, to exterminate them forever. If our neglected flocks of cattle, and still more neglected sheep, could be endued with the power of speech, how eloquently would they defend those friends, which give them power enough, almost unaided, to weather the winter's storm and which come to their aid in the spring, just time enough, to keep life and carcase together!—I allude to the grasses commonly called the blue-grass and the green-grass. They are highly valuable to all farmers, except those who are fond of *naked fallowing*.

We frequently hear it said, that the crop of any kind of artificial grass does not pay the expense of seed; which by the by, we should not be under the *eternal tax* of importing from other states; and that it flourishes badly, or is soon eaten out by the blue grass. As it is generally managed, this is very true, for this grass seems almost the only one in our climate, which can bid defiance to every enemy, except the plough and the hoe. When we look around and see our fields, after harvest, laid open, in common; the gates off their hinges, the bars of our fences down, the hogs and all other stock permitted to range at large to graze, to trample and to root; shall we wonder then, that the tender clover and other young artificial grasses, are involved in one common and total ruin? The fields which are intended to produce a crop of grass, or *be continued* in it, should be as carefully enclosed and guarded, during certain seasons of the year, as the fields which are intended to produce grain. It were just as preposterous to expect a field to produce a *crop* of grass without guarding it in its incipient growth, as it would be, to expect a crop of grain after a similar neglect.

More than one writer on agriculture has laid down the position, that grain farming and grazing, cannot be profitably *united;* and strange as it may seem, this assertion has actually grown into a *maxim* here, whilst the best farmers in Europe, Pennsylvania, Virginia, and this State, have for the last quarter of a century at least, been practically demonstrating to the world, *that it is untrue*. My experience is, that we had better give our grasses and hay to our live-stock, than to give it under a lay to the wheat crop alone. These green dressings of vegetable matter are but transitory and superficial gildings, utterly deceptious is their promise of *permanent* improvement; but when converted into animal manure it enters more *fixedly* into the composition of soils. When therefore our herbage is given to live stock, instead of to the wheat, the immediate profit of the crop is perhaps as great, and that which the land retains, is over and above. One of the most learned and intelligent of modern European writers, Grisenthwaite, has lately ascertained that soils to produce good *grained* wheat, must contain a certain portion of *animal* matter: to afford which, live-stock are necessary.

Perhaps the author who combines more effectually the general opinion of the English farmers, is Sinclair; and to prove to you that it is his opinion, that grain farming and grazing, are most profitable when united, I beg to refer you to his Code of Agriculture.* We are also informed by Radcliff, who has written an account of the agriculture of the Flemings, a people reputed the best farmers in Europe, that they have a maxim in Flanders—"No grass and hay, no cattle; without cattle, no manure; and without manure, no crop."† A rigid adherence to this maxim I take it, is the solid foundation on which is erected that superiority in good management, for which they are so justly famed.

I come now to offer some remarks on the best system of farming. It has not fallen to my lot to meet with, or read of any man, who has settled down fixedly into a rational, *digested* system of farming before he has had ten or fifteen years of experience. This proves the difficulty of our art, and will ensure for my errors in the one which I digested for myself some years ago, and shall now advocate before you, that degree of indulgence, which men of experience are the most willing to accord. My system, though essentially variant in one point, was suggested to me by that invaluable book Arator, and I felt my confidence in it much increased, when I discovered that it agreed in its important features with the very successful practice of a gentleman who lived on the Western shore, and was reputed in his life time the best farmer in Maryland;* and further still, when I recollected how nearly it corresponds with the system of that judicious farmer and worthy man, our present Senator in Congress.

Col. Taylor's enclosing system is good, where materials cannot be procured to make division-fences; but when they can, having tried it, I object to it on these grounds:—It will not permit us to keep a profitable live stock: It promotes the growth of noxious weeds, and multiplies and protects destructive insects. The crop after it, does not *grain* so well, nor does it improve the soil in the degree that some suppose.

It may be said with propriety that Manure is the basis of all good farming, and he who has a particular system or routine of crops, if he manures *one* of them in each course, cannot be said to farm badly. Indeed, with a plenty of manure, perhaps he might farm advantageously with any system; yet he will farm better if he interposes meliorating crops of grass between exhausting crops, and *still better*, if he allow the land to *rest* under the meliorating crops.

We are told "the Chinese smile at the idea of land requiring rest, as if like an animal, it could be sensible of fatigue." It cannot be wonderful that they entertain such a notion, when it is known that they always dress their land with manure of the strongest kind, and which no country will afford in sufficient quantity, but one so thickly settled as China.

Young, and Davy both assent, that the light, thin soils of England require rest under grass, to renovate them; and if so, in how much greater degree must it be requisite here, where our sun is so scorching, our fields so large, our population so thin, our labour so scarce, and our resources for manure comparatively so scanty.

The system which I have for six years been practising with increased confidence at every tillage, and which I would recommend, consists in a division of *four* fields: and, if enclosures permit, into four lots, proportioned to the size of the field as one is to ten, and cultivated as follows:

1. Year in corn manured in the hill, or broadcast.
2. In wheat.
3. In clover, cut or *carefully* grazed.
4. In clover, kept up whilst the 3d is grazed, and then made common for all the stock during the last winter it is in grass.

If a salt meadow, or other hack pasture can be added, to contain all the stock, fed occasionally on hay from the time they are turned off the field intended for corn, until the clover is grazable to advantage, which is not till about the first week in June, it will be found a very valuable acquisition.

The lots tilled in nearly the same rotation.

1. Year in tobacco, and other small crops of pumkins, &c. manured.
2. In wheat.
3. In clover to be cut.
4. In clover cut, or grazed, and treated as the field.

If we cannot divide our lots by fences, which are so desirable when we raise or fatten stock, the same small crops may, with almost equal advantage, be tilled within the corn field.

Putting all the stock during the winter and spring, on the field intended for corn, adds to its fertility, and together with ploughing *late* and corn, I have found the best security against the *clover insect*, the *ant* and the *grub-worm*. It is also a means for providing the best ingredient, urine, which Grisenthwait considers essential to the formation of the grain.

There are many advantages resulting from the tillage of a *variety* of crops, and not the least are those, which multiply the chances for a good crop and a good price for some of them. With this view of the subject, I conclude that tobacco should not have been entirely given up in this neighbourhood, and that it should be recurred to again; not as a *chief* crop, but as an auxiliary, or small crop. The culture of it as a chief crop, must at length exhaust any district; not because it is an exhausting crop; but because it neither affords food for man nor beast; and because the offal, though of prime quality as a manure, is very inconsiderable in quantity. Tilled in a small way, it cannot seriously interfere with manuring or other work, and it serves to afford employment for many rainy days, which would otherwise be lost. The eloquent objections, found in a chapter on the subject in his notes on Virginia, raised by the illustrious Jefferson, and who I believe almost wrote the crop down, are as to a partial tillage of this crop, completely removed, I conceive, by the introduction of clover and plaster, and the knowledge *now* possessed of the modes of carting and applying manure, of which our planters at the time he wrote, were utterly ignorant. Tobacco like every thing else has has fallen in price! but this fall is only in proportion to the rise of money value. It can never in periods, of profound peace be so heavily depressed as bread stuffs, and a single glance at the agriculture of the world will justify this assertion. In the bread stuff culture we have competitors for home supply or for exportation, in a greater or less degree, in almost every hole and corner of the civilized world. Not so with tobacco. Its district is narrowed down to a "very slender belt." On the one side, climate forbids its tillage; on the other it is supplanted by sugar and cotton—articles of greater profit.

South America may compete with us, but Europe and Asia, from a variety of causes must continue to decline the competition.

Independent of the noble bay and rivers that flow within their limits, and the facility with which their waters may be connected with those of the Western country, facts that may be regarded more as commercial than as agricultural facilities, there are decided *agricultural* advantages, which I believe this state and Virginia to possess, over any other section of our widely extended country.

At no former period, however, has the value of our navigable waters been more obvious than now, when the low price of most things renders it so important to get them to market at a very trifling cost. With our facilities of getting to market, we only require industry and good system to enable these states to compete, successfully, with the most fertile regions of the Western country.

But in Virginia, they can cultivate cotton to advantage, and in both states we can grow in the *greatest perfection* three important staples, wheat, corn, and tobacco; from which we may make a choice; or, we may embrace them all. Dr. Morse informs us in his geography, that in this State "two articles are peculiar; the genuine *white* wheat, which grows on this shore, and degenerates in other places; and the *bright* kite-foot tobacco which is produced on the Western shore."[*] This wheat, which grows in the greatest perfection within twenty miles below Wye river and the same distance above, is believed to be equal in quality to any produced in the known world; and the kite-foot tobacco is exceeded by none perhaps in value, except the crop of Cuba—the Varinas.

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* *See Code of Agriculture, pages,* 38, 268, 296, 293, 294.

† *See Radcliffs very interesting account of Flanders, page,* 69.

* *The late Gov. Lee. See his letter in the American Farmer, Vol.* 1. *page,* 123.

Mr. Darby, another distinguished American geographer and acute observer, in his account of Louisiana, says "that a more northern latitude is better for Indian corn than that of the sugar and best cotton districts," and instances 35 degrees, as probably the best latitude.[†] The average produce to the acre in that state he supposes to be about "twenty bushels," and the grain is inferior to northern corn.

These comparisons are not instituted, by me, for the illiberal purpose of undervaluing other sections of our common country. They are made, solely, for the purpose of rescuing our own section from unmerited reproach; to shew that if others have advantages, so have we, and enough to make us contented with our own lot; to strengthen our confidence under providence, in our own exertions for the attainment of agricultural prosperity, and consequent domestic happiness.

Let us descend for a moment to our own particular section. Though we have not the fertility of the vallies of the other shore, those of Pennsylvania, and the western part of New York, nor of the Connecticut river; yet it is believed, that wasted as it has been for centuries, still there is not a district in any of the atlantic states of equal extent, which can produce so much crop, with the same labour and capital employed as does this peninsula. Look at our fields, and see the grateful returns, which the small pittance of one shovel full of manure to the corn hill is ready to yield! See the facility with which our lands are tilled;—no hills, no rocks, no ravines to intercept the continued furrow; yet the surface is sufficiently undulating; and, with a little assistance, the superabundant water passes readily away. View your unbounded resources of manure, in how many places we find marl, oyster shells, and sea-weed! View the facility with which the poor may draw necessaries and the rich obtain luxuries from the water, by devoting a few hours in each week to that object or giving the equivalent, and say whether it is not preposterous in any man, be he rich, or be he poor, to go elsewhere in quest of "brighter skies, or fatter lands?" Nay, more, --say, whether it is not owing to the bounties of providence too profusely showered, that the people on the waters of the Chesapeake are so proverbial for their bad husbandry and negligent management? It is a trite but true remark, that men "will always make the greatest exertion, where the difficulty of procuring subsistence most requires it." And, besides affording us many articles of wholesome and delicious food, and many sources of manure, our waters are our public highways; and the winds of heaven are our carriers to market. The bounty of nature has relieved us from the expense of turnpike roads, and removed from us half the necessity for carts, for horses and for oxen.

With regard to health, our climate is perhaps in no respect inferior to that of our neighbours. Our shore has been remarkably exempt from autumnal fevers, for twelve or fifteen years preceding the two last; in which, however, we have by no means been solitary in our affliction. Fogs are supposed to be indicative of an unhealthy climate, and the fact may be considered not a little curious, when I assert that we have not, on this part of the shore, one fog for every ten which they have in the highlands about Baltimore; and, that they are not so frequent here as they are, every where, to the North. The cause of this fact, is not difficult to assign. Our country is level, with but little or no stagnant water or marsh, and the temperature of our *local* atmosphere is generally very nearly in equilibrium. This, perhaps, is the reason why our most level lands are the healthiest, as they are acknowledged to be. So also, stagnant water *in deep ravines sooner becomes putrid* than on planes, where the current of air has more scope to agitate, and keep it longer pure. Damp and warm vallies wherever found, load the atmosphere with moisture, which hovering around the hills, is seen as fog, until the growing warmth of day, rarefies and disperses it. And, it is believed that our water courses being salt, and in a level, improved country, are not so obnoxious to disease, as those of more rolling lands; unless these are sufficiently so to make the current rapid and precipitous.

It is remarkable that our intermittent fevers, on this shore, are of less malignant character, and more generally exempt from inflammatory symptoms, than those are which generally prevail in hilly regions. Thus, they are simple and easily controlled by medical art, and when an isolated case of low febrile disease appears to bid defiance to our skill, all bountiful providence seems to have placed as a dernier resort in the centre of our peninsula, at Barren creek, a Chalybeate spring, which for its tonic powers stands almost unrivalled.

Our lands though low and level, are generally dry, and may all be made so with but little labour; when therefore our Shore is effectually drained, cleared, and improved by good husbandry, may we not reasonably and confidently look forward to the possession of one of the finest climates, as well as one of the finest agricultural districts in the whole country? Let us then my friends and neighbours, one and all, set about this great work with cheerful hearts and busy hands, and persevere until we shall have accomplished, a purpose so benevolent—an end, so profitable!

* * *

The attention of our subscribers on the Mississippi, is respectfully invited to the following:

AMERICAN WINE.

TO THE EDITOR OF THE AMERICAN FARMER.

Dear Sir:—Under the head of "*Domestic Occurrences*," in the London "Matrimonial Magazine," for April 1775, I observe the following paragraph:—

"A small quantity of Claret and Burgundy, "was lately imported from Colonel Ball's settle-"ment, on the river Mississippi, which was "sent as a present to his Majesty, and is esteem-"ed *as good as the best imported from France*."

Now sir, might there not be something more than mere curiosity gratified in making inquiry relative to "Colonel Ball's settlement?" If that settlement has been broken up, may there not be some remains of his vinyard, or at least some traditionary account of his establishment, and of the process of his culture, &c? Might it not be satisfactory and useful to learn even the description of soil in which he planted his vines, their quality, whether foreign or native, and also the aspect of his plantation? Such considerations cannot be in better hands than your's, and wishing you every success in the great path of usefulness that you have marked out. Believe me,

Dear Sir, your obedient servant,
W. H. H.

Baltimore 18th July, 1822.

Editorial Correspondence.

Extracts from letters.

PHILADELPHIA, 29th May, 1822.

FINE WOOL—the home demand for it is steady, and far exceeds the supply.

"Our flock of sheep has been very expensive to us, our merinoes were selected with great care, and with our woollen factory have absorbed a large capital. Upon the increase of *fine wooled sheep*, the prosperity of such establishments depends. Our own, in Delaware, has suffered chiefly from the want of *prime* wool. Of inferior merino, we have constantly had an abundant supply; but we have not at any time, found a sufficient quantity of *prime* merino. Indeed, our dependence for the finest pile, has been unavoidably placed in wool of foreign growth. From the general character of the American Wool presented to us as merino, we conclude that the *fine* imported sheep have in most instances been left to mingle with common flocks: for from the observations which I have made upon the wool of merinoes, carefully selected and kept during a period of more than ten years, I may safely remark that it does not sink in quality or decrease in quantity."

TRANSPLANTING CEDARS—ESSAYS ON GARDENING, &c.

Huntsville, (Alabama,) July 12, 1822.

JOHN S. SKINNER, ESQ.

Sir:—I observe in your last No. (11,) information is requested as to the proper season for removing cedars, hollys, &c. Having but little experience on this subject I can only state the fact, that in February last I transplanted six cedars, about 18 inches high, all of which took root and are now in a thriving condition; the season was very wet and favourable for transplanting generally; at the same time I removed from the mountains to my yard, the tulip poplar, (Liriodendrum tulipa) mulberry, and locust; which have all succeeded well. But, although I have been successful with my cedars, a planter a short distance from town, informs me that he made the experiment almost every month in the year, without succeeding, until at the recommendation of a friend he planted them in *August*, in which case every tree took root, and he has a double row of perhaps 50 or 60 feet of the most beautiful cedars I have ever seen.[*] I should be glad to see more attention paid in your work to practical essays on gardening; a subject which has perhaps been too much neglected in this country, the works published on that subject are generally too diffuse, we want minute and practical details of the different modes of cultivating our common garden vegetables, similar to those published by you from a gentleman in the state of New-York, some time since; as well as, some account of the best methods of destroying the numerous insects which infest our vegetables, particularly cucumbers, melons and cabbages, the raising of all which is attended with much trouble in this section of country.

I am sir,
Very respectfully,
Your obedient servant,
SAMUEL HAZARD.

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[*] *Vol.* 1., *page* 466.

[†] *Page* 144.

[*] It may be seen in No. 13, page 103, of this vol. that our correspondent R. has transplanted ce-

dars very successfully any time between September and June. As the leaves of evergreen shrubs and trees survive our winter, and live until midsummer, when they give place to new leaves,* it is probable that, they can be transplanted with greater prospects of success after their new leaves are formed, than before. It is said in general terms, by Darwin, "that trees may be more safely removed in midsummer, than at any other period."—*Edit. Am. Farmer.*

MULES—Their merits will finally subdue our prejudices.

JEFFERSON COUNTY, *Va. 30th July*, 1822.

"When you consulted me last spring about standing a Jack in this neighbourhood, I discouraged the idea, under the impression that the popular prejudices against mules were inveterate and unconquerable. This impression was produced by an attempt which I myself made some years ago to introduce the mule, which proved unsuccessful. I purchased a very fine Maltese Jack, bred many valuable mules, sold them to gentlemen *at a distance*, at good prices, and offered premiums for mares to the Jack, but all in vain: nothing could then shake the stubbornness of vulgar prejudice, and the experiment failed, as to any other effect except to furnish my farm with a few mules that I still have, and which every day's experience more and more convinces me are infinitely superior to the *best* horses for *all* the purposes of farm labor. A Jack was sent from Washington City, to this neighborhood last Season and contrary to all expectation he has had upwards of sixty mules at six and eight dollars the season. This result has been very gratifying to me, but at the same time it has produced a regret that I advised you against sending yours here.

"Since our harvest has been gathered in, the wheat crop is found to be even more deficient than was apprehended. It is certainly under one half of an average crop, there is a general failure of clover sowed last spring:—our pastures are destroyed, and our corn is severely suffering by the present drought.

"Is it practicable to procure a Tunis ram of full blood, in your neighborhood? I prefer them decidedly to all other sheep, and if I can get one I will have him brought up by the first opportunity that offers, when the weather becomes sufficiently temperate.

Very respectfully, dear sir,
Your friend and servant,
H. S. T.

CARBON—Useful in fattening Hogs.

CINCINNATI, (Ohio,) January 16th, 1822.

"One idea has entered my mind which may be worth mentioning, but not for the press; you can perhaps improve upon it. The fattening of poultry on carbon, or carbon being one of the active means, together with aunt Dinah's theory, suggested to me the propriety of giving it to hogs, when penned and high fed for the purpose of being fattened. While standing by a pen, I observed the hogs to root very deep, with much labor. I watched them, to know if possible, the object of their great exertions, until I saw one come up with his mouth full of fresh earth, which he eat with an apparent avidity, while another would be engaged in the same hole the moment the first would be out; my presumption was that it was used as a corrector of some morbid fluid in the stomach, as they were plentifully supplied with corn and water. I gave them immediately some coal, which they eat with surprising avidity in preference to fresh food, then thrown in with the coals, and also in preference to their drink, which was thrown in fresh, or new; for, I should not say fresh, as I frequently put salt in the water for fattening hogs, and it might have been so at that time; they neither stopped to drink nor to eat grain, until the coal was all eaten. As the hogs are not yet killed, I cannot say what the internal appearance may be, but they discontinued their rooting, were more quiet, and appeared to fatten faster. I omitted it for a few days and they commenced rooting; I gave it again, and they discontinued rooting: I now continue to give them a moderate quantity daily, say the size of a hen's egg two pieces to each, but if more is given it will do no injury, an excess will operate only as a moderate purgative."

COTTON RECEIVED FROM ILLINOIS.

Mount Carmel, (Falls of Great Wabash,)
Edwards County, Illinois, April 16th, 1822.

I take the liberty of presenting you with a specimen of the product of our soil. It is I believe about the second quality of our cotton, being the first lock of it, that came to hand.* Not having any acquaintance with the merchants or manufactures of your city, I have forwarded this sample to you and if it be thought advisable, will gladly enter into a contract for a large supply.—Domestic goods,† might be advantageously exchanged for this article.

I am Sir,
Very respectfully
Your obedient servant,
THOMAS S. HINDE.

To JOHN S. SKINNER, Esq.

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* It is beautifully white and fine, but a little shorter than the Louisiana, it is worth 15 cts. per lb.; how much better then, as an agricultural surplus, would this be than breadstuffs are, when these will scarcely refund the expenses of taking them to the seaboard! we have for some time past been persuaded that flax, hemp, cotton and wool, ought to be more extensively produced in this country and especially in the Western States.—*Edit. Am. Far.*

† We understand that, our market is as well supplied as any on the continent, with Domestic Goods.—*Editor.*

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Selections from late numbers of the London Farmers' Journal, received at the Office of the American Farmer.

PEELING AND BARKING FRUIT-TREES.

The inquiry introduced through the treatise of Mr. Lyon, is to us, extremely interesting; and as we expect to hear from that gentleman on the subject of our remarks, it is needful that we should explain them as clearly as, without tediousness, we are able. By apple-trees being *removed out of a state of nature*, we expressly mean (besides the artificial mode of rearing them to standards) that they are planted, for convenience and domestic use, *on all soils.* On some soils they do well; on others indifferently; on some very badly, and on others they will not grow (to trees) at all. Now there is no tree in nature that will suit all soils; and if we were disposed to force the oak, elm, or fir, to grow every where, we might be just as much stirred up in quest of remedies for their want of health. We have elsewhere observed, that in countries wich nature has clothed with forests, the trees are *assorted*, as if they had been planted by the hand of man; because those which suit each respective *subsoil* (for it is this which gives staple, quality, and progress to the surface) grow vigorously, and subdue the rest; so that, although there is a mixed undergrowth, the large trees on poor subsoils, are all of one sort; on deep and cool subsoils they are more mixed, but not with any of those which cover are mixed, but again entirely different. In order to simplify this matter, suppose that an acre of shallow dry land, having a loose stoney bottom, were cleaned and prepared, and sowed with the mast of Scotch, and spruce firs, oaks, ashes, elms, beech, birch, &c., they might all spring up (and with weeding) grow a year or two; but the Scotch firs would grow away, and presently overtop and destroy all the rest; the beech and birch would last longer than the others, and drop their mast, but would finally only form an undergrowth to the firs. If we reverse this, and suppose the site to be deep and cool, suited to rich natural pasture, here the elms would soon be lords of the soil; although ash and poplar would struggle with them. On stiffish clay land, the oak would form the principal timber; and so on of other soils. Why therefore should we wonder that apple-trees, which we plant *every where*, should be unhealthy?

The second point which we would explain is this:—It may be inferred from our remarks in the former article, that apple trees should be supposed to thrive well, and escape disease every where, *provided they were reared in open spaces*, and suffered to swell properly from the first; by the foregoing observations this could not be. It is remarkable that the power of vegetable life, in good soils, should be able to overcome all the obstacles that are applied to the natural growth of stocks, and that they should swell away when finally relieved from the nursery, and planted on soils equally good, and make strong and healthy trees; but this is not to be expected when they are planted on poor subsoils: on shallow dry gravels, compact sandy bottoms, or any hard subsoils, they are liable to be very dry in summer.

Apple-trees thrive well on a variety of subsoils, but the land must be such, generally, as is suited to good natural grass; the bottom not overcharged with wet in winter, and not too dense a clay, so as to crack much in summer. Good gravelly loams, and limestone subsoils in general, are well suited to them. The richest and highest naturally drained *marsh land* in Lincolnshire, where the bottom is a brownish mellow, cool, and loamy sand, is exceedingly well adapted to this tree. On the contrary, in the adjoining fens, where the land is very good, but lies on *clay*, the apple-trees canker; and on skirty fen land, where the bottom is rapidly dried in spring, and much indurated in summer, (although the surface soil is deep) the disease is more prevalent and severe. Hence it does not appear that Mr. Lyon's explanation of the cause of canker is conclusive; we must take all the facts into consideration, that present themselves.

By Mr. Lyon's general reasoning he imputes *canker* to over-luxuriancy of growth; or, in other words, to the young trees taking up too much nourishment from the land (soil or subsoil) in which they grow. He finds trees peculiarly liable to this disease, clear of moss, vigorous when young, and breaking out into canker, from the supply of nutriment from the soil, overbalancing the power (or effect) of the atmosphere upon the branches; that is to say—to the trees drawing more from the soil than they can convert to wood or fruit. But this cannot be true, because when the supply of nourishment is the greatest possible, *provided* that the leaves, which open in spring, preserve all their healthy functions, (that is, when the trees grow in the best subsoil) the canker does not take place.

"We are told (says Mr. Lyon) that trees canker because their roots run into a cold till, or barren subsoil; and yet we are informed that in rich soils (as old fold-yards, &c,) they can scarcely preserve the native crab from canker," p. 72. But he does not consider, that a very rich surface soil, artificially made, may lie upon a barren subsoil (hollow or indurated) which is quite unfit to sustain a healthy tree of some years standing. And this is precisely the situation most liable to the disease; that is where *young trees* grow vigorously, but when their roots plunge, and seek nourishment from the bottom, they suddenly canker and decay. At the first, the trees make abundance of top, but they cannot stand with large tops, unless the roots descend in proportion; in plunging they get into a soil by no means equal to the surface, and thus the balance is lost between the top and bottom. Their vigorous shoots are then arrested in their growth; the leaves shrivel by the power of the atmosphere, and the trees canker, not because they have too much nourishment from below, but because they have too little.

Thus a hollow and sterile subsoil, indurated by nature, and liable to part by fissures in summer, must necessarily be saturated with the winter's wet; the surface soil may, notwithstanding, be mellow with gardening, and rich with manure; and the trees in spring put out abundant leaves, and prepare for vigorous growth; but in a very short time there is a deficiency of moisture below; the subsoil will not hold it; the water suddenly sinks, and percolates away, and the trees are left with their abundant foliage, insufficiently supplied with sap; and the ends of the twigs shrivel, and the leaves partially roll up, and sometimes die, and hang drooping as if they were burnt. So sudden an alteration of abundance and want are incompatible with regular health and progressive growth. We shall here add one practical fact, which goes directly to support this reasoning,—namely, that to *prevent the canker*, in a great measure, on such soils, the only method is to trench up the soil and subsoil, two or three feet deep, and let all be mellowed and mixed together a twelvemonth before planting. If, instead of this, we adopt the plan of *peeling*, the second year after planting (as mentioned by Mr. Lyon,) and if peeling tend to supply the tree with *more nourishment*, we do not see how the disease should be prevented, which he ascribes to a plethora of sap. Peeling trees, whether young or old, cannot well cause *less* sap to rise in spring, and *more* in summer; but another thing it may do, that is assist the maturation of the sap as it rises, and so promote health in the tree. Thus, if it stay, or moderate the ascent of the sap in the spring, the tree may be better enabled to *sustain* the preparation it makes for leaves and fruit; by Mr. Lyon's own reasoning, it admits the effects of light and heat on the trunk and branches, which assists the concoction of the increment as before. The fact is certain, that of cankered trees of some year's standing, *it occasions much more and better fruit*, but the *modus operandi*, may, without any great reproach to our understanding, be left among the arcana of nature.

Excepting that as we differ in this way from the reasoning of Mr. Lyon, we agree with him in many important particulars, which we shall refer to with pleasure in our future Numbers.—*Editor Farmers' Journal.*

From Sir Wm. Hope's "Complete Horseman, &c." of White Feet, Stars, Blazes, and Feathers.

"Although these marks, in the opinion of the Duke of Newcastle, are nothing but so many absurdities; as also what people say of white-footed horses, that there are *four good marks* belonging to them, and *seven bad;* yet since many people rely much upon them, I shall describe them as briefly as I can.

"The first good mark is when a horse hath only his far fore-foot white; the second, when he hath his near hind-foot white; third, the two hind feet white is a good mark, especially if he has a star, or a blaze in the forehead. Four white feet shews good nature, but are commonly not very strong; and the fore feet will incline to be brittle.

"The far hind foot white, is esteemed a bad mark; also the two fore-feet, but is not very common. The two fore-feet, and one hind-foot, is somewhat better. Two white feet of a side is a bad mark, so it is when a horse is cross white footed; although some persons esteem it good to have the far fore-foot and near hind-foot white, especially if he have a star with it." —We find here but *five* bad marks, so, to make out the number, we may add, that two white-feet behind and one before, is a bad mark, whether the fore-foot be right or left.

"Ermined white feet (says our author) are those which are freckled with little black spots round the coronets; an excellent mark. The higher the white ascends upon a horse's legs, he is so much the worse: but after all, the judgment drawn from colours and marks is according to men's fancies, there being good and bad of all colours, as well as of all marks.

"A *feather* is nothing else but a turning of the hair (sometimes called a *rose*) resembling in some an ear of barley, and a kind of oilet hole in others. When it reacheth a good way along the upper part of the neck near to the mane, it is a good mark; and if it be on each side the neck, the mark is better. So likewise if there be in the forehead, two or three of these oilet holes, separate from each other, or so joined as to form a kind of feather. Or if the like mark be upon the ply of a horse's thigh, and upon the back part of it, near to where the end of his dock reacheth, it is a very good mark.

"It is said of horses which have white faces, or blazes, that if the blaze be divided in the middle, crossways, the horse will be of an odd disposition; but if his near hind foot be white, it will rectify that blemish.

"Every horse that is not white or gray, is esteemed the better for having a star in his forehead. You may easily discover when it hath been made by art, because there will be no hair in the middle of it, and the white hairs will be much longer than the rest.

"The Hollanders roast a large onion in hot ashes, and being almost thoroughly roasted, they divide it in two, and dip it in scalding hot walnut oil, after which they immediately apply the flat side of it to the part of the forehead where they intend to make the star, and keep it there for half an hour; then anoint the scalded place with oil of roses: in a short time the scarf skin falls away, and there grows up in the new one some white hairs; but the star in the middle remains always without hair, as was before observed."

"*A discourse of Breeding, and how to raise a good and beautiful race of Horses.*"

We entered upon this chapter with great hopes of finding some curious, and perhaps useful, remarks, on breeding in general; or at least something which might be applied to the question which has lately been agitated in the Journal; and also to that which has been since proposed. (The subject is important, and is one of perpetual interest in agricultural pursuits.) But we experienced an almost total disappointment; which serves to shew that little or nothing had been then considered, or decided, in regard to domestic animals in general; nay, even as regards the subject above, scarcely any thing important is to be found, but that the Duke of Newcastle never used the colts of his own breeding for stallions; but chose the most beautiful of his mares, and put them always to imported horses from the original race. The passage is quoted from the Duke's book, which the above author says was *very scarce and dear* when he was writing, above 100 years ago, and therefore he only gave an abstract of it.

"You may provide yourself of young breeding mares from your own race; which as they are good, and of a good breed, will bring you forth more beautiful foals than any other, in respect that they have been engendered by a good stallion, and that the same that covers them did also beget them; for there is no such thing as incest among horses. But you are not to make use of your colts for stallions, because they will much degenerate from the true barbs; and if you should so make use of them from one generation to another, they would at last become like to the natural race of the country wherein they are: therefore I would never advise you to choose a stallion from your own breed, but rather that you would change him for a good barb or Spanish horse; but still make choice of the most beautiful mares of your own race to breed from."

The general directions above, do not include what is strictly meant by *in-and-in*, since this latter (as we understand it) would confine a whole stock to any two chosen original animals; that is, as soon as choice offers, you may select your males of course—but always within the progeny of the first two.

OF THE SPECIFIC INFLAMMATION OF THE EYE.

The disease now to be described, is perhaps the most common, and certainly is by far the most dangerous disease of the Eye of the Horse. It has seldom been distinguished from the simple and puriform inflammations of this organ, though its more serious consequences are well known.

This inflammation is seated in the internal parts of the eye-ball, affecting more particularly the choroid coat and the iris.

There usually comes on very suddenly, perhaps in a single night, a great tenderness in one eye, commonly marked by the eye-lid being shut, a copious secretion of tears, the white of the eye appearing slightly red, and the whole anterior chamber of the eye dim and coloured; there being no distinct speck on the cornea, as takes place in the common inflammation of the eye. The redness of the eye-ball is never very remarkable, even though the disease assumes its most aggravated form; but the dimness of the anterior chamber increases rapidly, and in two or three days, or even a shorter period, a yellow spot appears at the bottom of that cavity, arising from the formation of pus. Sometimes the quantity of pus is very considerable, and I have seen it fill at least two-thirds of the anterior chamber.

After lasting one, two, or three weeks, the inflammation and watering usually begin gradually to subside. The pus, though in a very large quantity, is sometimes almost entirely absorbed, so that scarcely any vestige is to be seen; and in other instances, thin webs of opaque matter remain, which destroy the transparency and lustre of the eye, and which by their adhesion to the edges of the pupil, interfere with its motions, and destroy its form.

It is astonishing how acute dealers in horses are, in discovering an eye which has had an attack of this kind.

Sooner or later, whilst the horse appears in a state of perfect health, the eye is again attacked, the disease being accompanied by the same symptoms, making a similar progress, and having the same termination; whilst each new attack is accompanied with the deposition of more and more opaque matter. Those attacks succeed each other at very different, and sometimes at very distant intervals, until the whole pupil is filled with an opaque white matter, and the sight of the eye completely destroyed.

During this progress, the disease is often confined to one eye, at least one eye is usually much more severely affected than the other. In some cases the two eyes are simultaneously affected, and finally, by a succession of attacks, the horse becomes completely blind.

If an eye, which has in this manner suffered, be dissected, it will be found that the external changes have been accompanied with still more serious internal derangements. The crystalline lens has lost its natural transparency, forming in the human eye what is called a Cataract, or in the horse, "*Moon blindness.*"

It has already been noticed, that horses are very subject to this disease. It attacks them of all ages, of all classes, and in all states of condition; though, as far as I have been able to observe, it is most common in those that are high bred, and in high condition. It is therefore probable, that dark, hot, and ill-ventilated stables, must have great influence in the production of this disease.

It is supposed to be most frequent in particular lines of blood; and those who breed horses for the turf, are averse to breed from mares or stallions who have weak or blind eyes.

This disease has usually been found incurable, and when a horse's-eye has once been affected with it, the proprietor is generally anxious to sell the horse, aware of the disease returning sooner or later, and finally terminating in blindness.

Bleeding, moderate purging, a cooling diet, and a well-aired stable, afford a temporary relief, and moderate the severity of the symptoms. Considerable benefit is derived, in some cases, from the application of the vinous tincture of opium two or three times a day, in the manner formerly directed. A seton in the temple, or cheek, has also been advised by some; but as far as I have been able to observe, these remedies never prevent the repetition of attacks, and the ultimate destruction of the organ.

FROM THE OLD COLONY MEMORIAL.

Sir,—In your last paper, a correspondent inquires, "from whence came the sweet corn, and at what time it was introduced here?"

Of the natural history of the *sweet corn*, it is presumed, that with all the other species of Indian corn, it is indigenous to America. Of this particular species, nothing was known in this section of the country (if in New-England) before 1779, in that year an expedition under the command of General Sullivan, was sent against the Six nations of Indians, inhabiting on the borders of the Susquehannah. Poor's brigade made a part of that expedition. A gentleman from this place,* then an officer in that brigade, on his return, after the expedition, brought some ears of that corn.† That was the first of the species ever seen here, and has, since that time been more and more diffused; and I believe within a *few years only*, has been generally and extensively cultivated for culinary purposes. The species has undergone some change since it was first introduced—then the core was a bright crimson, and after being boiled, and the corn taken off, if the core was laid in contact with any linen (the table cloth or a napkin,) it communicated an indelible stain, this inconvenience has disappeared—this species also, like what is distinguished by the appellation of southern, or flat corn, by repeated planting here, assimilates to our local corn—for a number of years I was careful in selecting the largest and fairest ears for seed, until it grew nearly as large and as fair as the common corn, and at the same time lost much of its peculiar qualities, *softness* and *sweetness*; and I concluded it would, in process of cultivation, become assimilated to the common corn of New England—although I accidentally discovered that the ears which were produced on the suckers (and it is very much disposed to sucker) were smaller, much more dishevelled, and in appearance perfectly similar to the corn which I first remembered to have seen. I then selected some of the ears from the suckers, which were sufficiently ripe and severed for seed, and found, that on the next year's planting, I had reproduced corn, at the least ten years retrograde; and have since then, annually saved a portion of the seed in that mode, the fact will be obvious to any one who is in the practice of gathering the corn, that the ears which are produced on the suckers, though small, retain the milk longer, and are suitable for the table longer, than those that are produced on the leading stalks.

Yours, &c.
PLYMOTHEUS.

FROM THE REPUBLICAN AND YEOMAN.

THE FARMER.

Hay.—The best period for cutting clover and herds-grass, is when they are in full bloom. This will be found to improve the quality of the hay more than is ordinarily supposed. Other grass, that grows short and dense at the bottom especially on cold and moist lands, and also on lands you do not intend to plough, should not be cut so early.—Not only will the crop of hay be materially lessened, but the land will receive no inconsiderable detriment from such early mowing.

The practice of salting Cattle in the winter is extremely injurious and should be abandoned.—To prevent the necessity of this, by far the best method is to put the salt upon the hay when it is put into mow. If this is done, your cattle will require no salt in its crude state during the whole winter nor will they take it if offered to them.—Another inducement to the practice of salting hay in the mow, is the unavoidable waste of salt and labor which accompanies the old method of using it in the winter in its crude state. It also prevents the danger of the hay's suffering injury from heat and by improving its quality, will occasion much less waste in the expenditure of it during the winter. This practice of seasoning the hay, will be found also to conduce much to the health and thrift of the stock. For the use of salt in the winter is accompanied sometimes with costiveness, and and at others it produces opposite effects, and invariably renders the cattle more susceptible of the cold. And it not unfrequently results in the loss of flesh, and disease.—Too profuse an use of salt upon hay would no doubt prove detrimental. About six quarts to the ton is the requisite quantity. Having for a series of years, pursued the practice of salting my hay in the mow, I consider it superior to any other method of using salt, by at least, two hundred per cent.

* * *

As tea contains volatile parts that should be preserved, and in which its better qualities exist, the tea-pot should be handed to each person on a tray with cups and sugar; for when made out of the room, all its reviving spirit has evaporated before it reaches the guest. It is not the bitterness but the fragrance of tea that is cheering. When the infusion has once been completed, it is found that any further addition of the herb only affords a very small increase of strength, the water having cooled, much below the boiling point, and consequently acting very slightly; therefore it is better to make fresh tea in a second vessel, than to add it to the exhausted and cool leaves.—*Phillips's History of Cultivated Vegetables.*

THE FARMER.

BALTIMORE, FRIDAY, AUGUST 9, 1822.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour from the wagons, $6 12½ cts. to 6 25—Wharf do., $6 cash—Wheat, white, $1 20 to $1 25—Red do., $1 15 to 1 20—White corn, 65 to 66 cts.—Yellow do,. 62 to 65 cts.—Wry, 50 to 55—Oats, 23 to 25 cts.—Shad, trimmed, No. 1. $8 to 9—Untrimmed, No. 1 do., $7 to 8—No. 2, do. $6, dull—Herrings, No. 1, $3 50—No. 2, $3—Beef, Northern mess per bbl. $10 to 10 25—Baltimore, prime do. $9 to $9 75—Hams, 10 to 12 cts.—middlings, 6 to 8 cts.—Cotton, West India, per lb. according to quality, 15 to 25 cts.—New Orleans prime, 16 to 18 cts.—Georgia, upland, do. 14 to 16 cts.—Cheese, N. England, 12 to 15 cts. scarce—Coal, Virginia, per bushel, 25 to 30 cts.—English do., 40 cts.—Flax per lb. 10 to 10½ cents—Hops, fresh, per lb. 10 to 12 cents—Hogs' lard, per lb. 9 to 10 cents—Hides, E. Shore, per lb. 8 to 10 cents—Leather, soal, per lb. 24 to 25 cts.—Upper do., whole hide, $3 to $4 25—Salt, St. Ubes, per bushel, 50 cts.—Cadiz, do. 42 cts.—Liverpool, blown, 40 cts.—Ground do. 50—Turks' Island, 60—Wool, Merino, full blood, per lb. 35 to 40 cts.—Do. mixed, 28 to 30 cts.—Common country do., 20 to 20 cts.—An advance in these prices from 12 to 18 cts., when assorted and cleaned—Pitch, per bbl. $2 25 to $2 50—Tar, per bbl., $1 60 to $1 70—Rosin do, $1 50 to $2—Turpentine, Soft, $2 25 to $2 50—Spirits Turpentine, per gal. 80 cts.—Beef, fresh, per lb. 6 to 10 cts.—Pork per lb. 5 to 8 cts.—Veal per lb. 6 to 10 cts.—Mutton, per lb. 6 to 8 cts.—Lard do., 12 cts.—Butter do., 20 to 25 cts.—Eggs, per doz., 12½ cts.—Potatoes, per bushel, 75 to 87½ cts.

Virginia tobacco—sales have been made at $7.

Maryland tobacco—same as last report—little sold the last week.

PUBLISHED BY J. S. SKINNER.
PRINTED BY JOSEPH ROBINSON.

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* *Captain Richard Bagnal, then a Lieutenant.*

† There *called* Pappoon *corn—probably from its tenderness and sweetness, made the food of children.*

AGRICULTURE.

We have on other occasions expressed, and yet more sensibly felt, that the agricultural interest is already, and is likely to be still more indebted to the patriotic disposition and liberality of the officers of our Navy. Though the field of enterprize, and of *nautical* research is comparatively restricted by a state of peace; nevertheless our officers are not idle, at home or abroad.—The letters that we have often and recently seen from beardless youths in that service, really do credit to the corps—they give us unaffected descriptions of foreign towns, scenery, habits, productions, government, &c. which, if not profound, are yet sprightly and amusing, and clearly indicative of that eager curiosity which is the pioneer of knowledge and parent of attentive observation; which promises the soundest fruit, when they shall have attained the vigour of maturity. Hence we find in our officers of higher grade and more experience, the variety of solid attainments; the facility of communication, and the polish of manners which fall only to the enviable lot of those who are blessed with active minds, the opportunity of observation by travel, and the sacred ambition to employ these advantages for their own honour and their country's good. But the idea we would more particularly intimate is, that to us, there appears to be something in the nature of their avocation which leads them to *agricultural* pursuits; whenever their feelings are no longer engrossed by the all-absorbing anxieties, and thirst for professional distinction, which naturally belong to a state of war. Proof on proof might be given in support of this suggestion; hence is it, that researches are now made in every foreign country, by the officers of the navy, for whatever may add variety and value to the stock of agricultural materials in their own: and in further corroboration, let us add with pride, that of all classes, having regard to their numbers, from which support could be expected to a journal almost altogether *agricultural*, the greatest *proportion* of subscribers to the Farmer, singular as it may appear, consists of *officers of the Navy.*—Again—It is to them we owe it, limited as their pay is known to be, that, within a few years past we have received through our publick ships—the fine horses of Arabia, of Barbary, and Peru—the large and spirited Asses of Malta, the beautiful cattle of Tuscany, celebrated since the days of Virgil—the sheep of Spain and Barbary—the Llamas and splendid specimens of the feathered tribes from South America—the prolific swine, and fine poultry of the East Indies, and the delicious melons of the Mediterranean, with grain, grass, and vegetable seeds from all quarters of the world. And we have no doubt but the Constellation, just returned to her native shores, has brought her contributions from the fertile coasts of the Pacific. It is true these offerings to agriculture are silently and unostentatiously made; but they are surely not the less valuable, or worthy of record and remembrance on that account. It would give us pleasure, could we do more particular justice to the individual contributors, amongst whom may now be named, without intentional slight to such as may be omitted, Bainbridge, Stewart, Chauncey, Downes, Jones, Morris, Henley, Ballard, Booth, Hambleton and Lattimer. That all these have within a few years made valuable presents to their country, in the way we have described, has fallen in most instances, casually, and in others *more directly*, under the Editor's notice—at our very elbow, more than two dozen volumes by different authors, on Italian agriculture, serve to remind us of the well applied zeal of the present gallant commander of our Naval forces in the Mediterranean, and it was owing to his accomplished predecessor in command that several pens at our late Cattle Show, were filled to the admiration of the Society.

The course of reflection in which we have here indulged, was occasioned by turning over our file of communications to the following notices and extracts respecting the agriculture of Italy—for which we are indebted to S. Hambleton, Esq., Purser of the Columbus, on her late cruise in the Mediterranean, under command of Commodore Bainbridge.—Edit. Am. Farmer.

EXTRACTS FROM GALAGNANIS' GUIDE THROUGH ITALY.

Soil and Agriculture of Piedmont and Lombardy, and of Italy in general.

Italy may be classed into three regions, according to the three systems of cultivation which distinguish them from each other; while the difference of climate, of productions, and of rural manners, will readily point them out to the observation, and the remarks of the traveller.

The first of these regions begins towards the Alps of Susa, and Mount Cenis, and extends to the shores of the Adriatic. It comprehends all the plains of Lombardy, separated by the course of the Po, into two nearly equal parts. The fecundity of the soil in this rich plain is such, that its various productions, which succeed each other without interruption, emulate each other in the luxuriancy of their growth; and from this skilful mixture of crops, this region may be called *the country of cultivation by a rotation of crops.*

The second of these regions extends over all the southern slopes of the Appennines, from the frontiers of Province to the boundaries of Calabria. This I call the region of the Olive Tree, or the *Canaanean cultivation.* It only occupies slopes and hills. This kind of oriental culture rises on steps on the sides of the mountains, in a series of terraces ingeniously supported by walls of turf, and covers these wild spots with several species of fruit trees.

The third region may be designated by the name of the *country of bad air*, or of Patriarch culture. It extends along the Mediterranean from Pisa to Terricina, and comprehends all the plains that spread out between the sea and the first chain of the Appennines. This region, fortunately the least extensive, depopulated by the plague of a fatal atmosphere, has beheld its antient prosperity disappear, with its villages, hamlets, and agriculture. These lands, covered with immense pastures, only serve to feed flocks, which, like those of the first inhabitants of the earth, form the only wealth of the shepherds to whom they belong.

Besides these three grand divisions, Italy contains also in its high mountains, wild districts, where the inhabitant lives only on the produce of the woods; and on the banks of the Po there are likewise vast meadows always green, and watered by innumerable canals, solely devoted to the rearing of numerous herds of cattle. But we shall now proceed to describe the system of agriculture followed in Piedmont, which greatly adds to the beauty of that country, surrounded by the Alps, and favoured by nature with its richest gifts.

The first agricultural region of Italy extends from the foot of the Alps to the foot of the Appennines, over that immense plain which begins at the passage of Suza, and only terminates on the eastern limits of Italy. This vast region may be called the garden of Europe, and is, without dispute, the part that has been most favoured by nature.

The soil deposited by the waters, equally rich and deep, is almost every where on a perfect level. Banks of pebbles are only found on approaching the mountains, the whole plain consisting of a black mould of great fertility. From the heights of the mountains which command all Lombardy, there descends a prodigious abundance of currents, which art has not yet been able to master; their direction, however, is divided in innumerable ways by the multiplication of irrigating canals, so that there is hardly a farm or a meadow that is not within reach of a canal and a sluice. This luxuriancy of irrigation is displayed under a beautiful climate, and unites with the action of a southern sun in producing all the phenomena of the most vigorous vegetation. These great natural advantages have long since accumulated in happy Lombardy an immense population, and with all its consequences; such as numerous towns and markets, with fine roads leading to them from every part of the country; the country itself subdivided into an infinite number of small properties, in the centre of which is the Farm House; and finally their land is cultivated with great art, and in such a way that neither space nor time is lost in its cultivation. The crops are bordered with plantations of fruit trees of every species, mixed with the mulberry, poplar, and oak;—and that even the latter may not serve merely for shade, it is made to support the vine plants, whose branches shooting forth on every side, cover them over like a dome, and fall back in festoons.

The taste for plantations is so great almost all over Lombardy, that the eye of the passenger cannot pierce through it; he travels through an horizon always veiled, and which he only discovers as he advances. This succession of landscapes, which always prepares something unexpected for the imagination; this freshness of verdure; these numberless habitations, which unite a degree of elegance with comfort; these fields, whose luxuriant shade has a wild appearance, while their cultivation bespeaks the utmost perfection of rural œconomy—present altogether a contrast and harmony which no other country exhibits in the same degree—we do not see here that wide and monotonous vegetation of the plains of India, nor those vast fields which spread over the uniform plains of the North; neither do we find those romantic spots in which the Swiss valleys display their charms; but we run over the face of a country in which these divers aspects seem to unite in a manner to recall them all to mind.

The accumulation of towns is enormous in Piedmont; and this country, the limited extent of which is disputed by a great extent of mountains, supplies grain and cattle to Genoa, to Nice, and even to Toulon. There is perhaps no country that can dispose of so great a portion of its annual productions, and none where the economy and administration of farms is better understood.—p. 46.

LOMBARDY.

The further we advance towards the East, in following the course of the Po, the deeper and more fertile is the bed of vegetable mould; but at the same time, the rivers, the beds of which, at the foot of the Alps, are deep with high banks, here flow on a level with the soil as they approach the Adriatic; and the country of course is better watered and more humid. The cultivation of corn* therefore diminishes, and the meadows extend over a vast space. This change becomes sensible in the environs of Placentia. The subdivision of the farms and the system of their administration are the same as in Piedmont, but the succession of crops and the agricultural produce are different.

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* *All kinds of grain.*

It is not so much corn as cattle which forms the wealth of this portion of Lombardy, and the face of the country becomes still more beautiful and more animated. All the right bank of the Po is planted with magnificent oaks, whose wide spreading range of branches gives a freshness and verdure that one would not expect to find in Italy. These oaks afford a harvest of acorns, which serve to fatten an immense number of hogs. And it is astonishing that the shade of these oaks hardly does any damage to the crops that grow under them, a circumstance that can only be attributed to the triple effect of the fertility of the soil, irrigation, and climate. It is in the plains that border on the course of the Po that those Parmesan Cheeses are made, of which the consumption is prodigious in Italy, and all over Europe. These meadows are the most fertile in the world; constantly watered, they produce three, and sometimes four crops of forage; but being divided into an infinite number of small properties which form a multitude of farms, there are but few that can keep up a cheese factory alone,as this requires the entire milk afforded by at least fifty cows. For this reason, these people have long since formed societies for making their cheese in common. Twice a day the milk of fifty or sixty associated cows is brought to the common dairy, where a man keeps an account of each separate portion of milk—a running account is thus kept up which is settled every six months by a proportionate quantity of cheeses.

The breed of horned cattle also changes in the neighbourhood of Placentia: we no longer see those large oxen of Piedmont, with reddish hair, and small horns, but the fields are covered with fine cows of a light slate colour, with thin legs, a cylindrical body, lively eyes, and long horns regularly twisted. This breed is evidently the produce of a constant crossing between the Hungarian breed, and that of the small Swiss Cantons.

This superb Hungarian breed subsists without mixture in the south of Italy, and affords the finest and best oxen in the world; but the cows are bad milkers, and the people of Lombardy long ago perceived that it was necessary to cross them to produce this effect, and to draw from their meadows all the produce of which they are susceptible. Thus, from a period, the date of which is unknown, 2000 cows annually, pass Mount St. Gothard and are spread over Lombardy, where they bring a principle of regeneration of the species, which alone preserves in the Italian breeds those qualities which render them precious.

The management of the farms is, as in Piedmont, a lease for half the profits;—but the succession of the crops is a little different. The meadows occupy a greater space, and the Indian corn cedes a great portion of the soil to the cultivation of hemp and winter beans. The succession of crops is generally as follows:—

1st year—Indian corn, and hemp manured.
2. *Corn.
3. Winter beans.
4. Corn, manured.
5. Clover, ploughed up after the 1st crop.
6. Corn.

In the environs of Parma they have begun to cultivate tobacco with great success, and it then replaces during the first year the Indian corn and hemp.

This judicious course of cultivation therefore affords, in six years, four crops of corn, one of hemp, and one destined for cattle; and this rapid succession is so skilfully intermixed, that the fertility of the soil is by no means exhausted, while at the same time all the necessary preparation can be given to the ground, and it can be cleared and cleaned at equal intervals.

Such is the agriculture of that portion of Lombardy which extends along the right bank of the Po, that is to say, a part of the first agricultural region of Italy, which we pointed out above. The reader will perceive that the crops are almost all of the nutritive kind, and that excepting silk and hemp, none is destined for manufactures. The result of this abundant provision of aliment is an immense population, no branch of which are manufacturers, because they have no material within their reach.—p. 142.

POMARIUM BRITANNICUM,

An Historical and Botanical account of Fruits, known in Great Britain, by Henry Philips. —Second Edition.

(Continued from page 146.)

CHERRY.—CERASUS.

In Botany, of the Icoscondria Monogynia Class. It was formerly considered by Botanists as a distinct Genus; but Linnæus pronounces it of the Prunus Species.

This beautiful fruit was procured and brought into Europe by the overthrow of Mithridates, king of Pontus, when he was driven from his dominions by Lucullus, the Roman general, who found the cherry-tree growing in Cerasus, a city of Pontus, (now called Keresoun, a maritime town belonging to the Turks in Asia,) which his army destroyed, and from whence it derived the present name of Cherry. Lucullus, who was as great an admirer of nature as he was of the arts, thought this tree of so much importance, that when he was granted a triumph, it was placed in the most conspicuous situation among the royal treasures which he obtained from the sacking of the capital of Armenia; and I doubt much if there was a more valuable acquisition made to Rome hy that war, which is stated by Plutarch to have cost the Armenians 155,000 men: we may very justly style it the fruit of the Mithridatic war.

Botany seems to have been more studied in early times by distingushed persons than at present. In this instance we find the conquered and the conqueror both botanists. Mithridates, whom Cicero considered the greatest monarch that ever sat on a throne, and who had vanquished twenty-four nations whose different languages he had learnt, and spoke with the same ease and fluency as his own, found time to write a treatise on botany in the Greek language. His skill in physic is well known: there is even, at this day, a celebrated antidote, called Mithridate, a particular translation of the account of which will be found in the history of the walnut.

It was in the 68th year before the birth of Christ, that Lucullus planted the cherry-tree in Italy, which "was so well stocked," says Pliny, "that in less than twenty-six years after, other lands had cherries, even as far as Britain beyond the Ocean." This would make their introduction to England as early as the 42d year before Christ, although they are generally stated not to have been brought to this country until the early part of the reign of Nero, A. D. 55.

Some idea may be formed of the Roman gardens, by the luxurious manner in which Lucullus lived in his retirement from Rome and the public affairs. He had passages dug under the hills, on the coast of Campania, to convey the sea-water to his house and pleasure grounds, where the fishes flocked in such abundance, that what were found at his death sold for more than twenty-five thousand pounds. Pliny mentions eight kinds of cherries as being cultivated in Italy when he wrote his Natural History, which was about the 70th year, A. D. "The reddest cherries," continues he, "are called *apronia*; the blackest, *actia*; the Cæcilian are round. The Julian cherries have a pleasant taste, but are so tender that they must be eaten when gathered, as they will not endure carriage." The Duracine cherries were esteemed the best, but in Picardy the Portugal cherries were most admired. The Macedonian cherries grew on dwarf trees; and one kind is mentioned by the above author, which never appeared ripe, having a hue between green, red, and black. He mentions a cherry that was grafted, in his time, on a bay-tree stock, which circumstance gave it the name of *laurea*: this cherry is described as having an agreeable bitterness. "The cherry-tree could never be made to grow in Egypt," continues Pliny, "with all the care and attention of man."

The county of Kent has long been celebrated for the quantity of cherries which it produces, and in all probability, they were first planted in this part of England, of which Cæsar speaks more favourably than of any other part which he visited. Some authors assure us, that the whole race of cherries that had been brought to this country by the Romans, were lost in the Saxon period, and were only restored by Richard Harris, fruiterer to Henry the VIIIth, who brought them from Flanders, and planted them at Sittingbourn in Kent. This appears to be an error, as Gerrard says, "the Flanders' cherrie-tree differeth not from our English cherrie-tree in stature or in forme," &c.

There is an account of a cherry-orchard of thirty-two acres in Kent, which, in the year 1540, produced fruit that sold in these early days for £1000, which seems an enormous sum, as at that period good land is stated to have let at one shilling per acre. We can only reconcile our minds to this great price, from the deficiency of other fruits in this country, and the splendour in which Henry the VIIIth and his ministers lived.

Fruit orchards are still considered the most valuable estates in Kent; and I learn from Boys's Kent, that cherry-gardens, while in full bearing, pay better than orchards; but the cherry-tree does not generally continue more than thirty years in perfection. Mr. Randall says he has known a single cherry-tree produce fruit that he has sold for above five pounds per year, for seven years in succession. Gerard says, "the Luke Warde's cherrie is so called, because he was the first that brought the same out of Italy; another we have called the Naples' cherrie, because it was first brought into these parts from Naples: the fruit is verie great, sharpe pointed, somewhat like a man's heart in shape, of pleasant taste, and of a deepe blackish colour when it is ripe."—This author mentions the Spanish and the Gascoigne cherry, &c. and says, "there are many other sorts in our London gardens."

The cherry seems to have been a fruit highly esteemed by the court in the time of Charles the First, as I find, by the survey and valuation of the manor and mansion belonging to his queen, Henrietta Maria, at Wymbleton (now Wimbledon) in Surry, which was made in 1649, there were upwards of two hundred cherry-trees in those gardens. (*Archælogia, vol. x. p.* 399.

I have observed, that the cherry-gardens in the vicinity of London, have what is termed an upper and under crop, which is done by planting strawberries or currants, &c. between the trees; and the latter fruit, I have noticed, has been as fine, and as productive, as when planted by itself, and engrossing the whole garden. Phillips says the apple tree is

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* *The American reader must not mistake "corn" for "Indian corn": wheat, rye, Barley—every thing made into bread is* "CORN."

Uneasy, seated by funereal yew,
Or walnut, (whose malignant touch impairs
All generous fruits,) or near the bitter dews
Of cherries; therefore weigh the habits well
Of plants, how they associate best, nor let
Ill neighbourhood corrupt their hopeful grafts.

Lord Bacon has clearly elucidated what the ancients considered the sympathy or antipathy of plants. "For it is thus," says this great man, "wheresoever one plant draweth such a particular juice out of the earth as it qualifieth the earth, so that juice which remaineth is fit for the other plant: there the neighbourhood doeth good, because the nourishments are contrary, or several; but where two plants draw much the same juice, there the neighbourhood hurteth; for the one deceiveth the other."

The cherry, like many other kinds of fruits has had its sorts so multiplied, by various graftings and sowing the seeds, that we now enjoy a great variety of this agreeable fruit, and for a considerable portion of the summer, as it is one of the first trees that yields its fruit in return for the care of the gardener. From the ripening of the Kentish and the May Duke, to the Yellow Spanish and the Morello, we may reckon full one third of the year that our desserts are furnished with this ornamental fruit; and to those who have the advantage of housed trees, the cherry makes a much earlier appearance, as it is a fruit that bears forcing exceedingly well.

Cherries have ever been found more tempting than wholesome. Pliny says, "this fruit will loosen and hurt the stomach; but, when hung up and dried, has a contrary effect." He relates, that some authors have affirmed that cherries, eaten fresh from the tree when the morning dew is on them, and the stones being also swallowed, will purge so effectually, as to cure those who have the gout in their feet.

Dried cherries are much esteemed for winter puddings, and the wine made from this fruit much resembles the red Constantia, both in colour and flavour. The small black cherries, with good brandy, produce one of the most wholesome as well as agreeable liquors. *Eau de cerises* is an admired liquor of France.

The wood of the cherry-tree, which is hard and tough, is next to oak for strength, and comes the nearest to mahogony in appearance: it is in much request by the turners for making chairs, &c.

The cherry-tree produces its fruit generally at the extremity of the branches; therefore, in pruning, they should never be shortened.

Judiciously planted the cherry-tree is very ornamental in a shrubbery, its early white blossoms contrasting with the sombre shades of evergreens in the spring, and its graceful ruby balls giving a pleasing variety in the summer.

There is a feast celebrated at Hamburg, called the "Feast of Cherries;" in which troops of children parade the streets with green boughs ornamented with cherries, to commemorate a victory obtained in the following manner: in 1432 the Hussites threatened the city of Hamburg with an immediate destruction, when one of the citizens named Wolf proposed that all the children in the city, from seven to fourteen years of age, should be clad in mourning, and sent as supplicants to the enemy. Procopius Nasus, chief of the Hussites, was so touched with this spectacle, that he received the young supplicants, regaled them with cherries and other fruits, and promised them to spare the city. The children returned crowned with leaves, holding cherries, and crying "*Victory!*"

CHESNUT.—CASTANEA.

In Botany, it is ranged in the Class of Monœcia Polyandria, and is of the Genus of Fagus, or Beech. The Fruit is more properly a Mast than a Nut.

The chesnut-tree was first brought to Europe from Sardis, (now Sart,) a town of Asia Minor, by the Greeks, who called the fruit the Sardinian nut, until it was honored by the appellation of Διός Βάλανος or Jupiter's nut. Sardis was burnt by the Athenians 504 years before Christ, which caused the invasion of Attica by Darius. We may therefore venture to conclude that the chesnut was thus early known to the Grecians. Pliny mentions eight kinds of chesnuts as being known to the Romans in his time, and says they were ground into meal, and made into bread, by the poor; "but when roasted," he adds, "they are pleasanter and better food." He also mentions one kind, *coctivæ* (chesnuts to be boiled.) Chesnuts were considered nutritive by the ancients, and good for those who retched up blood.

"Chesnuts," continues Pliny, "were much improved when men began to graft them."

The Romans called them *Castanea*, after a city of that name in Thessalia, from whence they first procured them, and where they were grown in great abundance by the Grecians.

Some authors affirm that the chesnut-tree is a native of this country. Dr. Ducarel maintains, in his Anglo-Norman Antiquities, that it is an indigenous, or native tree of this island; for this purpose he alleges, that many of our old buildings in London, and other places, contain a great quantity of this timber.

The remains of very old decayed chesnut-trees may be seen in the Forest of Dean, Enfield Chase, and in many parts of Kent. At Fortworth, in Gloucestershire, is a chesnut-tree fifty-two feet round: it is proved to have stood there since the year 1150, and was then so remarkable, that it was called "*The great chesnut of Fortworth.*"—It fixes the boundary of a manor. Mr. Marsham states that this tree is 1100 years old.

Cheshunt, or Chestrehunt, in Hertfordshire, is supposed to have been so called from the chesnut-trees with which it formerly abounded.

Camden remarks, that Cowdery Park, near Midhurst in Sussex, abounded in fine chesnut-trees. It is therefore evident that chesnut timber has been long known in this country; but I am induced to believe that it was one of the fruits which was introduced by the Romans to this island.

Chesnuts were certainly considered as a proper food for man by Lord Bacon, who in his "Essay on Plantations," says, "In a country of plantation, first look about what kind of victual the country yields of itself to hand; as chesnuts, walnuts, pine apples, olives, dates, &c. &c."

Chesnuts stewed with cream make a much admired dish, and many families prefer them to all other stuffings for turkeys; they make an excellent soup; and I have no doubt but that chesnuts might be advantageously used in cooking, so as to make many agreeable and wholesome dishes. I have had them stewed and brought to table with salt fish, when they have been much admired; but it is exceedingly difficult to introduce any article as food that has not been established by long custom; and it is not more strange than true, that the difficulty increases, if the object be economy.

The importation of chesnuts is very considerable both from Spain and Portugal, yet I believe it is rare if ever there is a single meal made from them in this country. The Catalonians have this strange religious practice. On the 1st of November, the eve of All Souls, they run about from house to house to eat chesnuts, believing that for every chesnut they swallow, with proper faith and unction, they shall deliver a soul out of purgatory.

As ornamental and profitable for parks, chesnut-trees are exceeded by no others, which all must acknowledge who have seen the fine avenues in Greenwich Park. There is no better food for deer than chesnuts, and they fall from the trees when other sustenance is scarce.

The timber is of equal value with the best oak, and, for many purposes. far exceeding it. No wood is preferable for making casks to hold wine and other liquors, as it imparts no taste to the contents, and has the property of maintaining its bulk constantly, without shrinking or swelling, as most other timber is apt to do, which often causes casks to burst. It has also the quality of lasting longer than elm, or any other timber, when used for water pipes, or other purposes, under the ground.

The chesnut-wood has recently been successfully applied to the purposes of dyeing and tanning, thus forming a substitute for logwood and oak bark. Leather tanned by it, is declared, by the gentleman who made the experiment, to be superior to that tanned with oak bark; and in dyeing, its affinity for wool is said, on the same authority, to be greater than that of either galls or sumach, and consequently the colour given is more permanent: it also makes admirable ink.

The great chesnut-tree, near Mount Etna, is perhaps one of the most extraordinary trees in the Old World. It is called "The chesnut-tree of a Hundred Horses," from the following traditionary tale: Jean of Arragon, when she visited Mount Etna, was attended by her principal nobility, when a heavy shower obliged them to take refuge under this tree, the immense branches of which sheltered the whole party. According to the account given of it by Mr. Howel, this chesnut-tree is 160 feet in circumference, and although quite hollow within, the verdure of the branches is not affected; for this species of tree, like the willow and some others, depends upon its bark for subsistence. The cavity of this enormous tree is so extensive, that a house has been built in it, and the inhabitants have an oven therein, where they dry nuts, chesnuts, almonds, &c. of which they make conserves; but as these thoughtless people often get fuel from the tree that shelters them, it is feared that this natural curiosity will be destroyed by those whom it protects.

HORSE-CHESNUT.—HIPPOCASTANEUM.

Æsculus; in Botany, of the Class Heptandria Monogynia.

This tree was first brought from the northern parts of Asia in 1588, and is now one of the greatest ornaments of our parks and plantations, particularly when in blossom.

The grand avenue of horse-chesnut-trees in Bushey Park, near Hampton-Court Palace, is the finest in England, and many parties go from London to see it when in full blossom.

There is a fine print of an old patriot of this neighbourhood, with the following inscription: "Timothy Bennet, of Hampton Wick, in Middlesex, Shoemaker, aged 75, 1752.—This true Briton, unwilling to leave the world worse than he found it, by a vigorous application of the laws of his country when in the cause of liberty, obtained a free passage through Bushey Park, which had many years been withheld from the people."

The fruit of the horse-chesnut-tree is ground, and given to the horses in Turkey, particularly to such as have coughs, or are broken-winded.—The turks also give it to milch cows, it being found to increase the quantity of milk, without injuring the quality. In France and Switzerland horse-chesnuts are used for the purpose of bleaching yarn, and are recommended as capable of extensive use in whitening, not only flax and hemp, but also silk and wool.

A patent was granted, in the year 1796, to Lord William Murray, for his discovery of a method of extracting starch from horse-chesnuts, and a paste or size has been made from them, which is preferred by bookbinders, shoemakers, and paper-hangers, to that made from wheaten flour. It is thought that the meal of this fruit can be converted into many useful articles, such as soap, &c. ; and as it loses its bitter astringent taste after it has been rasped into water, it is concluded that it would be a wholesome food mixed with flour or potatoes. The prickly husks are valuable for tanning of leather.

Zannichelli affirms, that he has made a great many trials, and has found the bark of the horse-chesnut-tree to have the same effect as the Peruvian bark.

This tree is of quick growth, and the timber has been thought of but little value, although it is in appearance so like the wainscot oak, that none but those who are accustomed to work on these woods, can discern the difference.

COCOA-NUT.—COCOS.

Natural Order, Palmæ ; in Botany, a Genus of the Monœcia Hexandria Class.

The cocoa-nut appears to have been known to the ancient Greeks, as I find the Macedonian soldiers, who accompanied Alexander the Great in his expedition into India, met with various Indian fruits, although they were not able to give the names of them. This nut was evidently one of the fruits they discovered; and their account of it has been faithfully transmitted to us in the twelfth book of Pliny's Natural History, chap. 6. "The fruit," he says, "is put forth at the bark, having within it a wonderful pleasant juice, and in such abundance, that one of them is sufficient to afford a competent refection for four men."—The Macedonians described the leaves as being of great size, resembling birds' wings.

From this period, which was about 325 years before Christ, little or nothing more was known of the cocoa-nut by the Europeans, for the space of 1823 years, when the discoveries of Columbus opening a wide field of speculation for the naturalists as well as the trader, this fruit became once more known to the Old World ; but it is only of late years that the cocoa-nut has been brought to England as an article of commerce.—It is now used by the West-India captains instead of wedges of timber, to fill up the vacua between the casks and other packages in their ships. The freightage of these large nuts is consequently considered as of no charge : they are therefore now become as common in the shops and in the streets of London, as the orange.

The cocoa-nut is the produce of a tree of the first importance to the Indians, as it furnishes them with meat, drink, physic, clothing, lodging, furniture, and fuel.

Chambers states, that many travellers aver, from the size and useful product of this tree, that from a single cocoa-nut tree and its fruit, a ship might be built, equipped, and laden with merchandise and provision.

It is supposed to be a native of the Maldive, and some desert islands in the East Indies, and from thence to have been transported to all warmer parts of America. The largest cocoa nut-trees grow on the river Oronooko, which reach to the height of sixty feet, and, bearing all their foliage at the top, produce a beautiful, waving, featherlike appearance.

The Spaniards call it *Palma de las Indias*, and the Portuguese *coco*, from the three holes in the shell, which give it the appearance of a monkey's head.

The kernel, or substance, which adheres to the interior of the shell of the cocoa-nut, is very nourishing, and is used instead of almonds in milks, emulsions, &c. These emulsions, when added to coffee instead of cream, give it an exquisite taste ; excellent cakes and fritters are also made from the kernel, when rasped.

The tender shoots of this tree, when boiled, afford an excellent substitute for cabbage.

A large cocoa-nut will produce upwards of a pint of milk ; and when young, it is esteemed one of the greatest dainties of America. As the fruit gets older, the milk becomes more sharp and cooling, consequently more agreeable to those of feverish habits. It is also esteemed highly antiscorbutic. Custards, blanc-mange, rice puddings, &c. are made with this milk.

An agreeable sweet oil, fit for the table, is procured, if the milk of the cocoa-nut be concentrated by ebullition over a moderate fire. The oil obtained from this nut by pressure is an excellent lamp oil, burning with a clear bright flame, without exhaling any odour or smoke. The substance from which this oil has been squeezed, is given to cattle, mixed with their forage, and greatly promotes the quantity of milk when given to cows.

A juice is obtained by tapping the trunk of this tree, or by cutting off the shoots which produce the nuts, and which is caught in jars attached to the trees. This liquor, after it has fermented, is distilled into a spirit called arrack, which is very superior to that drawn from rice : it also improves the flavour of rum when used in the distillation of that spirit. This juice, when exposed to the sun, produces vinegar.

The cocoa-nut-oil, composed with the emulsion, is a gentle purgative, without being nauseous or producing colic ; it is also recommended in coughs, and complaints of the lungs.

The filings of the hard shell, applied to old wounds, will cleanse and heal them rapidly.

In Maldivia, this nut is thought a powerful antidote against the venom of serpents and other poisons.

The milk is of the greatest importance in dyeing silks, cotton, or woollen stuffs, as it prevents black and other caustic colours from burning them, and gives a brilliancy to the colour. The emulsion of the kernel is used in the art of painting chintzes, and in scouring the cloth after the colours have been applied. The Hindoos procure their fine violet and rose colours by the assistance of this fruit.

The tough fibres or substance which encloses the shell, being steeped in water and beaten like flax, is then manufactured into linen.

The palms of this tree are made into mats for sleeping on ; the leaves, which are of great length, are made into baskets, hammocks, mats, brooms, racks, &c. and are used for the thatching of houses ; the trunk of the tree is employed for gutters, and split into laths for covering buildings, &c.

The shell of the fruit, when polished, is formed into basins, drinking cups, and a variety of useful articles.

The Emperors of Mogul highly esteemed the cocoa-nut for making goblets, which they have set with precious stones and edged with gold, believing that poison would lose its baneful qualities in these vases.

The cocoa-nuts have three holes closely stopped ; one of these being both wider, and more easily penetrated than the rest : from this, when the nut is planted, rises the germen, or young tree, first having ramified, and filled the whole cavity of the nut ; and then shoots out at the fore-mentioned hole in the top, and soon appears above ground in two narrow leaves: through these holes likewise is the water copiously distilled into the nut from the roots : thus has nature wonderfully made an egress for the future tree.

M. Le Goux de Flaix, an officer of engineers, and a member of the Asiatic Society of Calcutta, in his accounts of the cocoa-nut-tree, says it is a well-known fact, that the fibrous covering of the cocoa-nut is converted into good ropes, which are useful in navigation and for various purposes on shore. Cables for anchors made of this substance are much better than those made of hemp. They are exceedingly elastic, stretch without straining the vessel, and scarcely ever break, advantages which are not possessed by those of hemp. They are also lighter, and never rot in consequence of their being soaked with sea-water ; nor do they exhale damp or miasmata, which are exceedingly hurtful to the crews of ships who sleep on the same deck where ropes are kept when ships are under sail. These ropes are also easier managed, and run better in the pulleys during nautical manœuvres.

Some time since a cocoa-tree was cut down on Mr. Hanson's land, in Jamaica, which had been planted about a century, when, in grubbing up the root, the shell from which the tree had been raised was found quite sound and perfect.

The cocoa-tree growing in Chili produces a fruit not larger than a walnut, but this is more esteemed than the large kind which is brought to England.

COFFEE.—COFFEA.

In Botany of the Class Pentandia Monogynia ; Natural Order, Stellatæ. It is named after Caffa, in Africa, where it grows abundantly.

This berry, which affords such a wholesome and agreeable beverage, is said to have been drunk from time immemorial in Ethiopia, but of this we have no authority ; and as the use of most plants has been accidentally discovered, it is probable that the properties of coffee might have been first perceived by a goatherd (as related by Chambers,) who observed that his cattle, after browsing on this tree, would wake and caper all night, and that a prior of a monastery, being informed of it, first tried it on his monks, to prevent their sleeping at matins.

About the fifteenth century the use of coffee appears to have been introduced from Persia by Gemaleddin, Mufti of Aden, a city near the mouth of the Red Sea. He, finding it dissipate the fumes which oppress the head, give cheerfulness, and prevent sleep, without injury, recommended it to his dervises, with whom he used to spend the night in prayer. It was soon after this drunk at Aden, by all studious persons and those who travelled by night. It was progressively used at Mecca, Medina, &c. and Grand Cairo : hence it continued it's progress to Damascus and Aleppo. From the two latter places, it was intruduced into Constantinople by persons of the name of Shems and Hekin, in the year 1554, each of whom opened a public coffee-house in that city. These coffee-houses becoming a rendezvous for newsmongers, who made too free with state affairs, were suppressed by Cuproli, the Grand Vizier.

Rauwolfus, who was in the Levant in 1573, was the first European author who made any mention of coffee.

The Venetians seem to be the next who used coffee. Pietro Della Valle, a Venetian, writes from Constantinople in 1615, informing his friend, that upon his return he should bring him some coffee, which he believed was a thing unknown in this country.

Lord Chancellor Bacon makes mention of it in 1624: he says, "the Turks have a drink they call coffee, made with boiling water from a berry reduced into powder, which makes the water black as soot, and is of a pungent and aromatic smell, and is drunk warm."

M. La Roque, who published his journey into Arabia Felix, in 1715, contends that his father having been with M. de la Haye, the French ambassador at Constantinople, did, when he returned to Marseilles, in 1644, drink coffee every day; but the same author acknowledges that it was M. Thevenot, who taught the French to drink coffee on his return from the East, in 1657. It was made fashionable and more known in Paris, in 1669, by Soliman Aga, ambassador from Sultan Mahomet the Fourth, who gave coffee at all his parties with great magnificence; and it could not fail being pronounced an agreeable beverage by the Parisian ladies, after they had received it from his slaves with bended knee. If it were a matter of policy with the Turks to get coffee introduced into France, the ambassador's splendid porcelain, equipage, and gold fringed napkins, were the best recommendation that could have been given to a people who are so naturally fond of show.

Two years after, it was sold in public at the Foire St. Germaine, by Pascal, an Armenian, who afterwards set up a coffee-house on the Quai de l'Ecole; but not being encouraged in Paris he left that city and came to London: however, soon after this, some spacious rooms were opened in Paris, for the sale of coffee, and they soon increased to upwards of three hundred.

It is said to have been first brought to England by Mr. Nathaniel Conopius, a Cretan, who made it his common beverage, at Baliol College, at Oxford, in the year 1641, and that the first coffee-house in England was kept by one Jacob, a Jew, at the sign of the Angel in Oxford, in 1650. Coffee was first publicly known in London, in 1652, when Mr. Daniel Edwards, a Turkey merchant, brought home with him a Ragusan Greek servant, whose name was Pasqua Rosée, who understood the roasting and making of coffee, and kept a house for the purpose, in George Yard, Lombard Street, or rather, according to Mr. Houghton, in a shed in the Churchyard of St. Michael's, Cornhill. The famous Dr. Harvey used it frequently. Mr. Ray affirms that, in 1688, London might rival Grand Cairo in the number of it's coffee-houses, so rapidly had it come into use; and it is thought that they were augmented and established more firmly by the ill-judged proclamation of Charles the Second, in 1675, to shut up coffee-houses as seminaries of sedition: this act was suspended in a few days.

The first mention of coffee in our statute books, is, in 1660, (XII. Char. II. cap. 24.) by which, a duty of fourpence was laid upon every gallon of coffee bought or sold.

The Arabs seem to have been very jealous of letting this tree be known, and in order to confine the commodity to themselves, they destroyed the vegetable quality of the seeds; but Nicholas Witsen, burgomaster of Amsterdam and governor of the East-India Company, desired Van Hoorn, governor of Batavia, to procure from Mocha, in Arabia Felix, some berries of the coffe-tree, which were obtained and sown at Batavia; and about the year 1690, several plants having been raised from seeds, Van Hoorn sent one over to Governor Witsen, who presented it to the garden at Amsterdam. It there bore fruit, which in a short time produced many young plants: from these the East Indies and most of the gardens in Europe have been furnished. In 1696 it was cultivated at Fulham, by Bishop Compton, and in 1714, the magistrates of Amsterdam presented Louis the Fourteenth with a coffee-tree, which was sent to the royal garden at Marli. In 1718, the Dutch colony, at Surinam, began first to plant coffee; and in 1722, M. de la Motte Aigron, governor of Cayenne, contrived by an artifice to bring away a plant from Surinam, which, by the year 1725, had produced many thousands. The French authors affirm that it was planted in the Isle of Bourbon, in the year 1718, having been obtained from Mocha: this seems doubtful; but it is ascertained that M. Clieux carried the first coffee-plant to Martinico, in 1720. M. Fusée Aublet states that one tree only survived in the Isle of Bourbon, which bore fruit in 1720.—From Martinico it spread to the neighbouring islands. Sir Nicholas Laws first introduced it into Jamaica, in the year 1728, and planted it at Townwell Estate, now called Temple Hall, in Liguanea: the first berries produced from this tree sold at a *bit* each, which is equal to 6d. In the year 1752 the export of coffee from Jamaica was rated at 60,000 lbs.; and it has continued regularly to increase since that time, except when additional duties have been laid on, which have as regularly lessened the exports and the revenue also; an important proof, among others, how frequently heavy taxation defeats its own purpose.

In 1808, the exports from Jamaica were 29,528,273 lbs.; the next year they were lessened about four millions of pounds; in 1812, the export was 18,481,986 lbs.

Every gentleman who has stoves should raise this tree for the beauty of its appearance. It is an evergreen whose leaves continue three years; and being of a fine dark green, make a beautiful contrast with the clusters of pure white blossoms, which perfume the air with an odour like jasmine. Nothing can be conceived more delightful and grateful than the appearance and perfume of a field of coffee-trees when in full bloom: it has the resemblance of a shower of snow, which nearly obscures the dark green branches. The tree, like the walnut, produces smaller fruit, and better flavoured, as it becomes older.

The Turkey coffee is the smallest berry, and is more esteemed for its flavour than that which grows in the West Indies. I conclude that one great cause of the American coffee being inferior in point of flavour, is owing to the practice, in that part of the world, of gathering the berries before they are quite ripe, whereas the Arabians shake their trees, and by this means obtain the berries in full perfection. Mr. Lunan observes, that the West-Indian berries being considerably larger than those of the Turkey coffee, require much longer keeping; but Mr. Miller, the celebrated gardener, is of opinion, that the coffee does not require long keeping and that it loses a part of its flavour. He states that two gentlemen, who resided some years in Arabia, assured him that the berries, when first ripe, were very superior to those which had been kept: he also states, that from plants brought from the West Indies, and raised in English hot-houses, coffee-berries have been produced, which at a proper age, were found to surpass the very best Mocha that could be produced in Great Britain. Jamaica coffee is often sold as Turkey coffee in London, and there have been many samples sent from thence, that have proved quite equal to any Arabian berries. As coffee readily imbibes the smell or flavour of any article it comes in contact with, it is often injured in the voyage home, by being stowed near sugar, rum, pimento, &c. &c.; and the flavour which it thus contracts, cannot be separated again, even by roasting.

The most eminent physicians of every country have recommended the use of coffee for various complaints. It greatly relieves the head-ache, and is recommended to those of constitutional weak stomachs, as it accelerates the process of digestion, takes away languor and listlessness, and affords a pleasing sensation.

Coffee is often found useful in quieting the tickling vexatious cough. Sir John Floyer, who had been afflicted with the asthma for sixty years, was relieved by strong coffee.

The great use of coffee in France is supposed to have abated the prevalency of the gravel; for where coffee is used there as a constant beverage, the gravel and the gout are scarcely known.

Voltaire lived almost on coffee, and said nothing exhilarated his spirits so much as the smell of it; for which reason, he had what he was about to use in the day roasted in his chamber, every morning, when he lived at Fernai.

A friend writes me from Constantinople, that many of the Turks will subsist almost entirely on coffee, except during the rigid fast of the Ramadan, or Turkish Lent, which lasts forty days; during which time they neither eat, drink, or smoke, while the sun is over the horizon; and the use of coffee is then so strictly forbidden, that those who have even the smell of coffee on them, are deemed to have violated the injunctions of their prophet.

Among the various qualities of coffee, that of it's being an antidote to the abuse of opium must make it an invaluable article with the Turks.

Those who use opiates at night would find the advantage of taking strong coffee in the morning.

An interesting analysis of coffee was made by M. Cadet, apothecary in ordinary to the household of Napoleon, when emperor; from which it appears, that the berries contain mucilage in abundance, much gallic acid, a resin, a concrete essential oil, some albumen, and a volatile aromatic principle, with a portion of lime, potash, charcoal, iron, &c. Roasting develops the soluble principles. Mocha coffee is, of all kinds, the most aromatic and resinous. M. Cadet advises that coffee be neither roasted nor infused till the day it be drunk, and that the roasting be moderate.

Dr. Moseley, in his learned and ingenious Treatise, states, that "the chemical analysis of coffee evinces that it possesses a great portion of mildly bitter, and lightly astringent gummous and resinous extract, a considerable quantity of oil, a fixed salt, and a volatile salt. These are it's medicinal constituent principles. The intention of torrefaction is not only to make it deliver those principles, and make them soluble in water, but to give it a property it does not posses in the natural state of the berry. By the action of fire, it's leguminous taste, and the aqueous part of it's mucilage, are destroyed; it's saline properties are created, and disengaged, and it's oil is rendered empyreumatical. From thence arises the pungent smell, and exhilarating flavour not found in it's natural state.

"The roasting of the berry to a proper degree, requires great nicety. If it be underdone, it's virtues will not be imparted, and in use it will load and oppress the stomach: if it be overdone, it will yield a flat, burnt, and bitter taste; it's virtues will be destroyed, and in use it will heat the body, and act as an astringent. The closer it is confined, at the time of the roasting, and till used, the better will it's volatile pungency, flavour, and virtues, be preserved.

"The influence which coffee, judiciously prepared, imparts to the stomach, from it's invigorating qualities, is strongly exemplified by the immediate effect produced on taking it when the stomach is overloaded with food, or nauseated with surfeit, or debilitated by intemperance, or languid from inanition.

"In Vertigo, lethargy, catarrh, and all disorders of the head, from obstructions in the capillaries, long experience has proved it to be a powerful medicine; and in certain cases of apoplexy, it has been found serviceable even when given in clysters, where it has not been convenient to convey it's effects to the stomach. Mons. Malebranche restored a person from apoplexy by repeated clysters of coffee.

"Du Four relates an extraordinary instance of the effect of coffee in the gout: he says, Mons. Deverau was attacked with the gout at twenty-five years of age, and had it severely until he was upwards of fifty, with chalk stones in the joints of his hands and feet: he was recommended the use of coffee, which he adopted, and had no return of the gout.

"A small cup or two of coffee, immediately after dinner, promotes digestion.

"With a draught of water previously drunk, according to the eastern custom, coffee is serviceable to those who are of a costive habit."

The generality of English families make their coffee too weak, and use too much sugar, which often causes it to turn acid on the stomach. Almost every housekeeper has a peculiar method of making coffee; but it never can be excellent, unless it be made strong of the berry, any more than our English wines can be good, so long as we continue to form the principal of them on sugar and water.

Count Rumford says, "Coffee may be too bitter; but it is impossible that it should ever be too fragrant. The very smell of it is reviving, and has often been found to be useful to sick persons, and to those who are afflicted with the head-ache. In short, every thing proves that the volatile, aromatic matter, whatever it may be, that gives flavour to coffee, is what is most valuable in it, and should be preserved with the greatest care, and that, in estimating the strength or richness of that beverage, its fragrance should be much more attended to, than either its bitterness or its astringency. This aromatic substance which is supposed to be an oil, is extremely volatile, and escapes into the air with great facility, as is observed by it's filling a room with it's fragrance, if suffered to remain uncovered, and at the same time losing much of it's flavour."

(*To be continued.*)

Selections from late numbers of the London Farmers' Journal, received at the Office of the American Farmer.

ON IMPROVING THE BREED OF HORNED CATTLE.

Sir, *Akehead, June* 2, 1821.

The means by which Mr. Charles Colling improved the Ketton Short Horns, and the admixture of the blood of that stock with others, afford a body of facts, illustrated by experience, which, perhaps, throw considerable light upon the art of breeding horned cattle in general. The methods by which he proceeded demand peculiar attention. Use, or profit, was his constant aim: but the procurement of it was directed to obtaining the greatest value of carcase alone in return for the food consumed. Had milk and carcase combined formed the basis of his selections, it may not be too much to say, he would never have obtained that early maturity, excellent quality of flesh, aptitude to fatten, and perfect symmetry, by which his bull Comet was so pre-eminently distinguished.

In his selections, Mr. Colling wished to bring such animals together as, in his judgment, were most likely to attain the great end of his exertions. Whenever he found one suited to his purpose, he endeavoured to become possessed of it, though the price were very considerable. Thus, for his cow Favourite, and her calf Strawberry, he paid Mr. Maynard thirty guineas, at a time fully equal to sixty guineas at present. He was, however, but little guided by long pedigrees and distinguished ancestors, though they may be well worth attending to at present, in a breed selected with success.

It is agreed on all hands, and what the price paid for Mr. Maynard's cow corroborates, that the Tees-water short-horns were a valuable breed of cattle prior to their improvement by Mr. Colling. Indeed, some will have it, though ill-supported by subsequent facts, he made them no better than he found them. But how did he find them? Will any one undertake to prove they were any thing more than large useful animals, that possessed about as much "point" (excellence in all points) as the polled breed of Galloway have at present; which, when examined in particulars, nearly dwindles into no "point" at all, though the breed may be justly esteemed for its general properties?

If the short-horns possessed little or no "point," how did Mr. Colling obtain it? We may readily suppose by using his bull Hubback. Much excellence, when examined in particulars, has been attributed to this bull. If this were not so, how does it happen all the valuable short-horns are descended from him? Then, what was Hubback? The breed of his sire has been satisfactorily ascertained: but of his dam little more is known than that she had that remarkable propensity to fatten for which the improved short-horns are distinguished. It is worthy of remark, that the descendants of this bull, partaking of the excellent qualities of his dam, should have characters quite distinct from the general breed to which he belonged; namely, a capacious chest and prominent bosom; a thick mossy coat and mellow skin; a great deal of fine flesh spread equally over the whole carcase, particularly along the back and on the ribs; deep flanks, drawn in a line with the sides; a broad level back; fine shoulders; a clean, broad, straight* thigh; fine boned short legs, and a great aptitude to fatten. Will any one tell us where short-horns are to be found at the present time, possessing these peculiarities, and unmixed with the blood of Hubback? or will any one tell us of a breed of short-horns, even mixed with that blood, which have them in so pre-eminent a degree as his real relatives? And is not what is called high blood uniformly estimated by their near kindred to his immediate descendants? Thus, in producing a pedigree, it is thought quite sufficient to shew how nearly they are related to Foljambe, Lord Bolingbroke, Favourite, and Comet, bulls bred by Mr. Colling, and descended in a direct line from Hubback. What places Mr. Colling in a high point of view, is the fact that he was the breeder of the whole line of these eminent bulls from Hubback, without being indebted to any other person for a sire.

Characters, which are not to be met with in the common breed of short-horns, form the leading peculiarities of the Kyloe: besides, there is a striking resemblance between the eye of the improved short-horns and that breed. We may therefore reasonably conclude the dam of Hubback had some of that blood in her veins, and which communicated to the improved short-horns those valuable properties for which the Highlander is noted.

This opinion is not singular. Mr. Hutchinson (see The Farmers' Journal, No. 670) observes, "there formerly was in this county, between the year 1760 and 1800 (and probably long after,) a race of most excellent short-horned cattle, unmixed with the Kyloe;" which implies the improved short-horns have a mixture of Kyloe in them. This is precisely the view I entertain;—that the dam of Hubback owed her astonishing propensity to fatten to an admixture of Kyloe blood; that the acute and observing habits of Mr. Colling noticed the valuable qualities of her son, and assimilated them with the best short-horns he could procure.

All the most valuable short-horns have been produced in this way. The Chilton, Suckburn, and many other stocks, had acquired considerable eminence before their admixture with Ketton bulls. What has placed the Chilton stock on a level with the Ketton and Barmpton short-horns, but this circumstance? Mr. Mason commenced upon a pure breed of Tees-water cattle, which were crossed with Lord Bolingbroke, Favourite, Comet, and other bulls of great eminence. Perhaps, no one had the use of these famous bulls to the same extent, except the Messrs. Colling themselves; and since the Ketton and Barmpton stocks have been sold off, it is by many considered the best stock in the hands of any single individual.

It may be worth while to enquire what have been the peculiar advantages derived from the intermixture of the Kyloe and Tees-Water short-horns. The latter acquire a great size at an early age, and are tolerably well shaped; but naturally too thin of flesh, too strong boned, and deficient in those general requisites which denote a truly valuable breed. When crossed with Hubback, supposed to have been a mixture of Kyloe and short-horn, the essentials wanted were acquired, though somewhat reduced in size: but as they had more flesh, less bone, and much neatness, they lost none of their weight when fatted, were considerably more valuable by the stone, and consumed less food; for large raw-boned animals, such as the common breed of short-horns is at the present day, consume more food in proportion to their value, than such as are light of offal, and have much rich roasting beef. Thus, when Mr. Hutchinson crossed his Sockburn cow with Petrarch, one of the highest bred bulls of the day, he tells us he obtained what Major Rudd "never had—a Herod." Certainly, then he was indebted to the new principles of breeding, resorted to in rearing the Ketton Stock, for Herod. But what breeder would go to Herod for a pedigree in preference to Petrarch, his sire?

So far I have endeavoured to follow the history of the improved short-horns. Being but a novice in these matters, my object is to promote *open* and *liberal* discussion, to elicit such truths as may prove useful and, extend the bounds of knowledge in the profitable rearing of horned cattle. In laying any information I am acquainted with on this head before your readers, if in error, I shall be happy to stand corrected. At some future time, perhaps, I may continue this subject.

Will your correspondent, *A Breeder*, have the goodness to inform us what tribe brought as high prices at the Ketton sale in 1810, as Lady and her progeny? Will he also tell us what tribe of cows are more nearly related to the blood of Hubback? And what tribe excel them in neatness, lightness of offal, in mellowness in handling, and fulness of coat? Are not these the chief points which have brought the Ketton stock into public notice, and rendered them truly valuable in reducing the rough bones and long legs of the common breed of short-horns?

I am Sir,
Your obedient serv't,
JOHN ROOKE.

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* *We are not sure that this is the word.*—Edit.

P. S. As none of your correspondents who have grazing farms have thought proper to state their losses within the three last years, are we to take it for granted that grazing farms have not been loosing concerns, and that they can afford to pay the present rents? or are we to conclude the graziers dare not look over their losses?—J. R.

ON THE PRINCIPLES OF IMPROVING BREEDS OF STOCK.

Sir, *Worcestershire, June* 14, 1821.

The discussion of the question of Sir Leoline's pedigree having drawn from Mr. Rudd a statement that he believes the short-horns are not a *pure breed* of cattle, I am induced to request his opinion, or that of any experienced person, on the long disputed point, whether distinct breeds of cattle may, under judicious management, be crossed with a reasonable expectation of improvement?

Of the produce of the cow Lady, respecting whose pedigree *A Yorkshire Breeder*, in his zeal for the public, expressed a desire to be informed, it cannot be necessary to say much, the opinion of that public having stamped a value upon them, which neither the insinuations of rivalry nor the imputations of less creditable feelings will be able to depreciate; and I am of opinion, that upon this instance of successful crossing, the advocates for that system may securely make their stand.

But in addition to the conviction afforded in this individual case, others are not wanting, whose facts lead to the same conclusion, and I shall mention one of them. It is generally believed, and will not I think be denied, that the most celebrated breeder of improved Hereford cattle, grafted his stock upon animals in no way partaking of Hereford blood; and to his judicious selections on those occasions (veiled under the closest secrecy,) has been attributed the production of the best animals passing under the denomination of improved Hereford cattle. Such is the general opinion of the country; and though some individuals will probably not admit the fact, I think they will find it difficult to shew to the contrary.

I have trespassed so far on your valuable paper, in order to bring the subject fairly before your readers, as I am particularly anxious it should be ably discussed, in which hope, if I am successful, I think my moving the question will not have been without some degree of utility.

I am, Sir,
Your obedient Serv't.
H.

ON THE PRESERVATION OF HARNESS.

Sir, *June* 1, 1821.

Allow me to recommend the following method of preserving leather harness and traces, engine hose, boots and shoes, cording, sheep nets, cart covers, stack cloths, &c., in the most effectual manner, to the attention of your agricultural readers, as an invaluable acquisition. Take of neats' foot oil one quart; bees wax, cut small, one ounce; oil of tar half a pound by weight; and after simmering the neats' oil and wax a little in a pipkin, the oil of tar must be added, when, after a gentle simmering again for a few minutes, stirring it the whole time with a stick, the mixture will be finished; at the same time, if an ounce of naptha be comeatable, and the purpose for which it is to be used should render the expense no object, the composition will, by the addition thereof, receive considerable improvement. It is used precisely as oil would be applied; and where it may be required to *soften* old and hardened leather, a washing or sponging with hot water first is advisable, and the liquid should be driven in before the fire.

Leather or cordage dressed with this liquid never rots, hardens, grows mouldy, or perishes with blacking: it is likewise a complete destroyer of scabbiness in sheep and other animals. I gave the form, about seven years back, to a person who made a benefit of its sale in town, and afterwards, contrary to a pledge given me, sold the same to two people who now retail a very inferior composition.

As to the expense, one application of this fluid is superior to four or five of oil.

Where the rendering leather water-proof is desirable, the ounce of naptha proposed to be added, should have a dram of Indian rubber dissolved in it; for it should be remembered that those things which give suppleness to leather, open its pores; whereas, to make it water-proof, the closing them up by astringent applications, or filling them up by waxy or gummy ones, is indispensable. It is perhaps right to add, naptha is highly inflammable, and therefore should be kept from the fire and candle, and added "*after the mixture is taken from the fire.*"

I am, Sir, Your very obed't serv't,
W. M. DINSDALE.

ON THE ILL EFFECTS OF IRON-BOUND FEET.

Little Marshall, Ide, near Exeter,
Sir, *Devon, May* 24, 1821.

A letter in your Journal of Monday last, renews in my mind a subject I have often been on the point of addressing you upon; and one, as relates to horses of quick action, of as much importance as Wardrop's Essay on the Diseases of the Eye: I mean the consideration of the Horse's Foot, and the injury induced by the application of an inelastic ring as a protection to a part, formed, in all its outward parts, by Nature for full and free exercise of elasticity. Twenty years ago, or rather more, in the indulgence of a regard to my riding horse, so naturally the feeling of youth, I was led to observe in my own, and, indeed, more or less in the horses of every one else, a degree of contraction taking place in the foot: in some, the affection (for it was not at that period supposed a disease) was of slow progress, while in others it was rapid and destructive. Various were the methods tried to avoid the growing evil, but all proved abortive. At an early period, after my mind had become alive to the subject, I became acquainted with Bracy Clark, an eminent London Veterinary Surgeon, who was posecuting a similar inquiry, and through his professional information I was ultimately indebted to the knowledge of what was requisite to the heathy protection of the foot of that truly noble animal, the horse. This induced me, six years ago, to make use, with some trifling alteration, of a shoe, known formerly, in the sporting world by the name of "the huntsman's shoe;" it being customary for them to be carried by huntsmen for the accommodation of gentlemen whose horses might accidentally throw a shoe; and, having a rivet in the toe, was, from its capability of expansion or contraction, easily accommodated to the foot of any horse. After I had used this shoe twelve months, I wrote Bracy Clark an account of the result, which had proved beneficial beyond my most sanguine expectations; still they were not altogether fit for general use, and therefore no public exhibition took place of them. I however, continued their use, and with great success, getting such alterations made as circumstances seemed to dictate the necessity of; always communicating my experiments, as I proceeded, to my worthy and respected friend B. C., who, I am happy to find, has now brought a shoe to perfection, which stands the test of public experience. It is now six years since I have used jointed shoes, and I therefore think I may be allowed, from the success I have experienced, to name it for the benefit of the public, and particularly for that part of the agricultural world who are engaged in breeding and breaking valuable horses, many of whom are sent, at early ages, to London, with contracted feet from shoeing, not as the general mode of expression is, "bad shoeing," but *from shoeing* which, *as generally used*, is *altogether*, *in the* BEST HANDS, BAD!

I send you herewith (which I shall be glad, when your curiosity and that of your friends in your immediate vicinity is gratified, to have returned) two coffin bones; the one formerly belonging to an animal that had been shod in the common mode, and the other to one that had never worn other than the jointed shoes, and leave to make your own comments. The natural age of the horse is from 25 to 30 years! How many never reach seven or nine, from bad feet, arising from the mode of shoeing in general practice!

The horse arrives at his full growth at seven, and full beauty and roundness of parts at nine, after which they are capable of their greatest exertion; yet, from the uncorrected evil in the old mode of shoeing, few persons like to buy a horse without a mark of CHILDHOOD in his mouth.

I remain, Sir,
Your's very obediently,
JOHN HALL.

P. S. I last week had a young Guernsey bull (a stock I am particularly choice in) attacked in the eye with a complete opacity of the aqueous humour, which yielded in about three days to a copious bleeding from the jugular vein.

☞ The difference in appearance, both in shape and colour, and in density (or ossification,) between the two coffin bones sent, is very striking; that from the foot shod on the improved principle, is whiter, better formed, more porous, and specifically lighter than the other; which latter is too perpendicular (or stunted at the toe,) somewhat twisted, narrow, and rough like a rasp, the difference in *colour* may be owing to the latter having been longer kept, or taken from a more aged animal; but if the other peculiarities be owing to the shoeing, as above stated, the subject is deserving the most serious consideration of every man who is interested in horses.—Edit.

FOR THE AMERICAN FARMER.

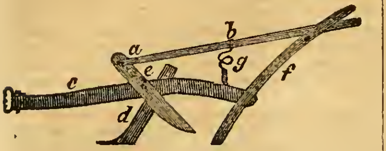
A "PLOUGH-CLEANER;" AND A "HOLD-FAST."

Downingtown, (Pa.) 7th Month 14th, 1822.

Respected Friend,

I have received thy acceptable letter, and really wish that I could add to the merits of thy work, by "frequent mental contributions," as thee desires me to do. But I feel great delicacy in venturing any remarks among the able productions of thy correspondents. And I know so little of the theory of Agriculture, that my observations must necessarily be confined to a few practical matters, such as might occur to any one who has been raised as a plain farmer.

I will, however, now give thee a description and drawing of an appendage to the plough; which I have used, for several years, and found very convenient; it is a "plough cleaner." I very recently exhibited the contrivance, before the Philadelphia Agricultural Society, and it was approved by their Committee on Implements.



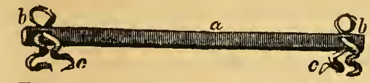
The staff B, rests towards one end on the coupling round of the plough handles; at the other end it has a mortice, A; to receive the upright E; they are connected by a pin, so as to work like a hinge.

The upright E, is placed three inches before the coulter D, and joined to the beam, C, by a screw bolt, which may be passed through either of the *three holes* in the upright, so that its range can be adapted to the depth of ploughing.

The front edge of E, is made a little circular, to prevent its acting as shears; G, represents a circular thin steel spring, screwed on the beam and tied with a string to the staff, B. The whole contrivance is placed on the land side of the plough.

The ploughman, when he wishes to use it, grasps the staff with his left hand, and drawing it backwards causes the lower part of E, to advance and rid the coulter of whatever had collected about it. The spring G, will then restore the upright and staff to their former positions, ready to be used again.

I will now likewise give thee a description of a very simple means, called a "hold-fast," by the use of which, sheep, calves and hogs, may be carried in wagons or carts, with perfect safety; and, which may be very useful at sheep-shearings.



The stick A, should be about three feet long with a mortice near to each end, BB, to receive doubled straps, CC, the loops of which will fasten one fore and one hind leg against the stick, whilst the others are tied on the opposite side by the ends of the straps.

When such animals have their legs all drawn together, as we usually tie them, the stomach and bowels are so compressed and injured by their confined struggles, as often to occasion injury and loss; but the "hold-fast," allows their limbs to be extended, and keeps their fore legs distant from the hind—thus, they may be carted with perfect safety.

I am with much respect thy friend,

JOSEPH KERSEY.

Editorial Correspondence.

On the usefulness to Farmers of Agricultural Monthly Reports *of the state of the weather, and the prospects and produce of the different Crops.*

Bedford Springs, August 4th, 1822.

A view of the pastures and growing crops on the road to this place from Baltimore, suggested to me that you would do well to procure from particular correspondents to be relied on in different sections of the country—periodical Reports, in general terms, of the state and prospects of weather and crops; somewhat in the way of the *Monthly* Agricultural Reports made from different counties in England to the Board of Agriculture. You know that up to the time of my leaving Baltimore, the *immediate neighbourhood* had been favoured with seasonable rains and hot suns, highly propitious to the growth of Indian corn; and hence the general impression there that the crop of this grain would be very abundant, and the *price low*—whereas on my passing even to Reisterstown, I perceived a deplorable difference in the prospects of the Farmer in this particular; from that place quite to Chambersburg, the pastures were literally burned up: the corn not worth gathering—and all nature seemed thirsting for rain. In Gettysburgh, we were told that wells were now dry which were never before exhausted, and the water, like every thing else, in the *Stage Tavern* of that City, and Chambersburgh, was fit for any thing but to refresh and recruit the "way worn traveller."

One obvious effect to be expected from collecting and distributing agricultural intelligence in the form of reports from different parts of the country, as proposed above, would be this—it would tend to prevent ruinous fluctuations in the prices of agricultural commodities. The buyer and seller would meet each other on fairer, on safer ground; advised of the probable *average* crop, and the extent of the demand, their dealings would be *adjusted* by a scale approaching to the actual state of things—whereas, for want of this intelligence, both parties commonly act under false impressions; thus the merchant is sometimes ruined by a short sighted speculation, and the farmer or planter more frequently injured by having from his retired situation, and more limited means of intelligence, a less extended view of the general products of different crops. Because his immediate vicinity has been blessed with copious rains and invigorating suns, he presumes that providence has shed its blessings alike on every quarter, and sells his produce for half its value before the average product, and the actual scarcity have been developed. If then, I say, you could gather from gentlemen of known veracity, a brief and general statement, from time to time, of the existing prospects and final yield of the several staple commodities, cultivated within the wide range of your paper's circulation, farmers, or at least all of your subscribers, would be prepared to make their own, and a just estimate of the *value* of what they have for sale; and they would be secured from such mortifications as those which were experienced, this very year, by persons who sold their corn for 22 and 25 cents, and in less than six months saw the buyers sell the same corn for more than 80 cents per bushel!!!

THE FARMERS' FRIEND.

P. S. It will give you an idea of the difference of climate, and the progress of vegetation between this place and Baltimore county—to state, that the *oat* crop here is not yet gathered in; and barley is still quite green, in a field near the springs. I have heard much said of the flavour of the *mountain* mutton, but no superiority over ours has been perceptible in the quality of that which I have seen. The high and precipitous acclivities, and rough face of the country, here in the mountains, would appear to be the congenial abode for this animal of *climbing* propensities; and were these extensive forests converted into pasture land, this district would sustain *immense* flocks of Merinos: and wildernesses, now abandoned to wild beasts, be made to yield prodigious contributions to our national wealth. The chief obstacle to be encountered is the length and severity of winter; but this might be shortened and mitigated, as it has been on the Atlantic, by the intervention of the axe and the plough, *as is supposed*. You shall hear from me again, after this desultory manner, should any thing present itself worthy of notice and reflection.

A correspondent residing in Sussex County, Virginia, informs us under date of the 1st of August, 1822, that the Crops were very promising, and that Fruit never was more abundant.

NORTH CAROLINA PEAS.

Raleigh, N. C., 15th July.

"In travelling to Newbern, I have been asked at houses of accommodation on the road (taverns there are none) how many peas I would have given to my horses? If I answered, *none at all*, I have sometimes been told that they fed with nothing else! They are reputed very nutritious, but have been known to kill horses not accustomed to their use."

THE FARMER.

BALTIMORE, FRIDAY, AUGUST 16, 1822.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour from the wagons, $6 25 cts. to 6 50—Wharf do., $6 25 cts. cash—Wheat, white, $1 23 to $1 27—Red do., $1 20 to 1 26—White corn, 60 to 62 cts.—Yellow do,. 60 to 63 cts.—Rye, 50 to 55—Oats, 23 to 25 cts.—Shad, trimmed, No. 1. $8 to 9—Untrimmed, No. 1 do., $7 to 8—No. 2, do. $6, dull—Herrings, No. 1, $3 50—No. 2, $3—Beef, Northern mess per bbl. $10 to 10 25—Baltimore, prime do. $9 to $9 75—Hams, 10 to 12 cts.—middlings, 6 to 8 cts.—Cotton, West India, per lb. according to quality, 15 to 25 cts.—New Orleans prime, 16 to 18 cts.—Georgia, upland, do. 14 to 16 cts.—Cheese, N. England, 12 to 15 cts. scarce—Coal, Virginia, per bushel, 25 to 30 cts.—English do., 40 cts.—Flax per lb. 10 to 10½ cents—Hops, fresh, per lb. 10 to 12 cents—Hogs' lard, per lb. 9 to 10 cents—Hides, E. Shore, per lb. 8 to 10 cents—Leather, soal, per lb. 24 to 25 cts.—Upper do., whole hide, $3 to $4 25—Salt, St. Ubes, per bushel, 50 cts.—Cadiz, do. 42 cts.—Liverpool, blown, 40 cts.—Ground do. 50—Turks' Island, 60—Wool, Merino, full blood, per lb. 35 to 40 cts.—Do. mixed, 28 to 30 cts.—Common country do., 20 to 20 cts.—An advance in these prices from 12 to 18 cts., when assorted and cleaned—Pitch, per bbl. $2 25 to $2 50—Tar, per bbl., $1 60 to $1 70—Rosin do, $1 50 to $2—Turpentine, Soft, $2 25 to $2 50—Spirits Turpentine, per gal. 80 cts.—Beef, fresh, per lb. 6 to 10 cts.—Pork per lb. 5 to 8 cts.—Veal per lb. 6 to 10 cts.—Mutton, per lb. 6 to 8 cts.—Lard do., 12 cts.—Butter do., 20 to 25 cts.—Eggs, per doz., 12½ cts.—Potatoes, per bushel, 75 to 87½ cts.

Tobacco, Maryland—4 hhds. Elk Ridge, good red, first $7 25—Seconds $4—other Maryland Tobacco, no sales.

Virginia, dull—no sales.

PUBLISHED BY J. S. SKINNER.

PRINTED BY JOSEPH ROBINSON.

HORTICULTURE.

POMARIUM BRITANNICUM,

An Historical and Botanical account of Fruits, known in Great Britain, by Henry Philips. —Second Edition.

(Continued from page 167.)

CRANBERRY.—VACCINIUM MACROCARPUM.

In Botany, a Genus of the Octandria Monogynia Class.

This fruit, which is so much esteemed in tarts, or with cream, is a native of England, and is found growing in the peaty bogs of Sussex, Cumberland, Norfolk, Lancashire, and in other marshy lands. Gerard calls the fruit *fen-berries*: "they grow," says he, "in fennie places, in Cheshire and Staffordshire, where I have found them in great plentie." Valerius Cordus called them *oxycoccon;* the Dutch term them *fen grapes.*

Dr. Withering states, that at Longton, in Cumberland, there is a considerable traffic carried on in cranberries; that on the market days, during the gathering season, the sale of these berries amounts to from twenty to thirty pounds sterling per day: many people in that neighbourhood make wine from cranberries; but never having tasted this liquor, I can give no account of it's quality. The English cranberries, which are preserved in bottles with no other care than keeping them dry, are very superior to those large cranberries imported from the northern parts of America, which are now so common in the shops of London. These berries, being packed in large casks, must undergo a fermentation during the voyage, which consequently deprives them of a part of their natural flavour. Cranberries are also imported from Russia and Germany; and during this last year great quantities have been brought from New Holland, which are smaller, and darker coloured, than those brought from America, and very superior in flavour.—Cranberries are found growing in many parts of Spain and Hungary. They are the produce of damp swampy lands only: but the idea that they will not bear transplanting, is erroneous, the late Sir Joseph Banks having planted some near a pond in his grounds at Spring Grove, which have produced fruit beyond calculation. This information may be worth the attention of those who have marshy or brook land, as a matter of profit; and to those who have ornamental water in their gardens or parks, it would be found an embellishment to the banks; it being an elegant little fruit on the ground, where it trails, and spangles the grass with its red and variegated berries.

Sweden produces abundance of cranberries, but they are only used for cleansing plate in that country.

A new species of cranberry is now cultivated in this kingdom, which has been called Snowberry, on account of the colour of the fruit: it was brought from Nova Scotia in the year 1760 by Mr. Jonathan Laycock, and is stated to be found in the swamps of Cyprus also. This berry has a perfumed taste, like *eau de noyau*, or bitter almonds: it is reared by Mr. Joseph Knight, of Little Chelsea, and several other nurserymen near the metropolis. Another variety was brought from Madeira in 1777, which requires the shelter of the green house; and the Jamaica cranberry, which was introduced the following year, will not thrive in this country except in the stove.

Cranberries are of an astringent quality, and esteemed good to restore the appetite: they were formerly imagined efficacious in preventing pestilential diseases.

CUCUMBER.—CUCUMIS.

In Botany, a Genus of the Monœcia Syngenesia Class.

The cucumber, which is one of the coldest fruits, is evidently a native of a warm climate; and by all the researches I have been able to make, I conclude it belongs to the soil of some parts of Asia and Africa. It was known to the Grecians, as their earliest writers on natural history have mentioned it, and in particular recommend that the seeds should be steeped for two days in milk and honey before they are set, to make the fruit sweeter and pleasanter. Pliny mentions the great quantities that grew in some parts of Africa, and particularly in Barbary.—All vegetables are so formed as to perpetuate themselves by seed in the climate where they originate; for if this was not the case, every species of plant that is not cultivated, would soon cease to exist; and the cucumber has never been found to grow in the natural state in any part of Europe.

Columella is the oldest author who gives any direction for forwarding cucumbers by artificial means. "Those who wish for them early," says he, "should plant the seeds in well dunged earth put into osier baskets, that they may be carried out of the house, and placed in warm situations when the weather permits; and as soon as the season is advanced, the plants may be sunk in the earth with the baskets, or wheels may be put upon large vases, that they may be brought out with less labour; notwithstanding they ought," continues he "to be covered with *specularia*," which seem to have been transparent stones, that the Romans were in the habit of cutting thin, so as to admit light, and keep out the air, glass being unknown at that period.

It is related by Pliny, "that Tiberius the emperor was so fond of cucumbers, and took such pleasure and delight in them, that there was not a day, throughout the year, passed over his head, but he had them served up at his table. The beds and gardens wherein they grew, were made upon frames, so as to be removed every way with wheels; and in winter, during the cold and frosty days, they could be drawn back into certain high covered buildings, exposed to the sun, and there housed under roof." These appear to be the earliest accounts of the forcing of plants which we read of in ancient times. It is probable also, that artificial heat was used; as we find, by the remains of their villas in this country, how perfectly the Romans were acquainted with the method of warming their rooms with flues.

Pliny says, "To make a delicate salad of cucumbers, boil them first, then peel them from the rind, and serve them up with oil, vinegar, and honey."

Mr. Aiton mentions the cucumber as being first cultivated here in the year 1573, in the reign of Queen Elizabeth. This appears to be an error, as cucumbers were very common in this country in the reign of Edward the Third; but being unattended to during the wars of York and Lancaster, they soon after became entirely unknown, until the reign of Henry the Eighth, when they were again introduced to this kingdom. *(Gough's British Topography, vol. I. p.* 134.*)*

Gerard gives the earliest directions for making hot beds for cucumbers in this country, which was in 1597, when gardening was in it's infant state. He directs, that they should be covered with mats over hoops, as glasses were not then known.

Lord Bacon who wrote about the same period, says, "cucumbers will prove more tender and dainty if their seeds be steeped (little) in milk: the cause may be, for that the seed being mollified in milk, will be too weak to draw the grosser juices of the earth, but only the finer:" he adds, "cucumbers will be less watery if the pit where you set them be filled up half way with chaff or small sticks, and then pour earth upon them; for cucumbers, as it seemeth, do exceedingly affect moisture, and over-drink themselves, which this chaff or chips forbiddeth." This great author also states, that "it hath been practised to cut off the stalks of cucumbers, immediately after bearing, close by the earth; and then to cast a pretty quantity of earth upon the plant that remaineth, and they will bear the next year fruit, long before the ordinary time. The cause may be, for that the sap goeth down the sooner, and is not spent in the stalk or leaf, which remaineth after the fruit; where note, that the dying in the winter of the roots of plants that are annual, seemeth to be partly caused by the over-expence of the sap into stalk and leaves; which being prevented, they will superannuate, if they stand warm." Miller informs us, that the cuttings of cucumbers, taken off about five or six inches long, from healthy plants in the summer crop, at the end of September or beginning of October, planted in pots of rich mould, plunged into the bark bed and shaded until they have struck, will produce fruit before Christmas. It is also recorded in Miller's Gardener's Dictionary, that Thomas Fowler, gardener to Sir Nathaniel Gould, at Stoke Newington, presented King George the First with a brace of well-grown cucumbers, on New Year's Day, 1721. The seeds from which they were raised were sown on the 25th of September.

His late revered Majesty had his table supplied with cucumbers, at all seasons of the year, by Mr. Aiton, under whose care the Royal Gardens of this kingdom have produced, in the highest perfection, nearly all the known fruits of the world.

Cucumbers are much less used in their natural state than formerly, among wealthy families, but they are in great request for stews and made dishes, and when preserved they are esteemed one of the most agreeable sweetmeats. As a pickle, girkins have been long admired; but whoever purchases them, should be careful to get them free from any substance that may have been used to colour them.

Lunan, in his account of the *sativus*, or cultivated cucumber, says, "although cucumbers are neither sweet nor acid, they are considerably acescent, and so produce flatulency, cholera, diarrahœa," &c. Their coldness and flatulency may be likewise in part attributed to the firmness of their texture.

They have been discharged, with little change, from the stomach, after having been detained there for forty eight hours. By this means, therefore, their acidity is greatly increased; hence oil and pepper, the condiments commonly employed, are very useful to check their fermentation. Another condiment is sometimes used; *viz.* it's skin, which is bitter, and may therefore supply the place of aromatics; but it should only be used when young.

Brookes states, that the cucumber is unfit for nourishment, and is generally offensive to the stomach, especially if not corrected with a good deal of pepper as well as vinegar. The seeds, he states, are reckoned among the four greater cold seeds, therefore emulsions of them have been prescribed in burning fevers, &c.

Cowper has beautifully described the method

To raise the prickly and green coated gourd,
So grateful to the palate; and when rare,
So coveted; else base and disesteem'd,
Food for the vulgar merely.

The Rev. Griffith Hughes, in his Natural History of Barbadoes, mentions the wild cucumber-vine as indigenous to that part of the world. It is called by Father Plumier, *anguria fructu echinato eduli:* he describes the fruit as a small cucumber, whose surface is covered with many soft pointed prickles: it is sometimes eaten; but is esteemed to be of too cold a nature to be wholesome.

Lunan, in his Hortus Jamaicensis mentions the small wild cucumber as being a native of Jamaica, where it grows very plentifully, and is often used with other herbs in soups, and is a very agreeable ingredient: the rind is thickly beset with blunt prickles. Sloane mentions it as a pale green oval fruit as big as a walnut, and says it is eaten very greedily by sheep and cattle.

The ancients used the wild cucumber as a sovereign remedy in various complaints. "The best kind," says Pliny, "was found in Arabia, and the next about Cyrene and Arcadia."

It was from the juice of these cucumbers that they procured the medicine called *elaterium*, which, Theophrastus states, could be kept good two hundred years; and for fifty years it would be so strong and full of virtue, that it would put out the light of a candle or lamp. Pliny says, "to try good elaterium, it is set near to a lighted candle, which it causes to sparkle upwards and downwards."

Elaterium was used not only as a purgative, but against the sting of scorpions, and for the dropsy: with honey and oil, it was used for the quinsy and diseases of the windpipe: it was said to cure dimness and other imperfections of the eyes, the ring worm, tetter, &c. as well as the swelling kernels behind the ears.

The juice of wild cucumber leaves dropped with vinegar into the ears, was thought a good remedy for deafness. A decoction of the fruit being sprinkled in any place, will drive away mice; it was also said to cure the gout, &c; indeed, so many virtues were attributed to it by the ancients, that if we were inclined to give credit to them, it would cause our wonder to find they had any complaint uncured.

The Romans had also many superstitious opinions respecting these wild cucumbers. Wives who wished for children wore them tied round their bodies; and they were brought into houses by the midwife, but carried out, in the greatest haste, after child-birth.

Columella has recorded a variety of wonderful stories respecting the garden-cucumber; and some English authors, of great celebrity, have stated, that when a cucumber vine is growing, if you set a pot of water, about five or six inches distance from it, it will shoot so much in twenty-four hours as to touch it: but that it will shrink from oil, and turn fairly away from it.

——— The gourd
And thirsty cucumber, when they perceive
Th' approaching olive, with resentment fly
Her fatty fibres, and with tendrils creep
Diverse, detesting contact.

Phillips.

CURRANT-TREE.—RIBES.

In Botany, a Genus of the Pentandria Monogynia Class.

This agreeable and wholesome fruit is undoubtedly a native of our country: it was formerly found growing in the wild state, in woods and hedges in Yorkshire, Durham, and Westmorland, as well as on the banks of the Tay and other parts of Scotland. As a further proof of its being a northern fruit, we have no account of its having been at all known to the ancient Greeks or Romans, who have been very accurate in describing all the fruits known in their time.—It seems not to have grown so far south as France; for the old French name of *groseilles d'outre mer* evidently bespeaks it not to have been a native of that country, and even at the present time their language has no appropriate name for it distinct from the gooseberry. The Dutch also acknowledge it not to have been indigenous to Holland, where it was called *besskins over zee*. Whether the Dutch first procured this fruit from Britain, or from any other northern countries, we must acknowledge ourselves indebted to the gardeners of that country for so improving the size, if not the flavour of this fruit.

The English name of currant seems to have been taken from the similitude of the fruit to that of the small Zante grapes, which we call currants, or Corinths, from Corinth, where this fruit formerly grew in great abundance, and which are so much used in this country for cakes, puddings, &c.

The Italians seem to have no other name for the currants than *uvette, little grapes*. At Geneva they are called *raisins de Mars*. The currant does not appear in the list of fruits published by Thomas Tusser in 1557, which I have transcribed to shew what fruits were cultivated in the latter part of Queen Mary's reign.

Apples of all sorts, apricots, barberries; boollesse, black and white; cherries, red and black; chesnuts; cornet plums; damisens, white and black; filberts, red and white; gooseberries; grapes, white and red; green or grass plums; hurtil berries; medlers, or meles; mulberries; peaches, white and red; peeres of all sorts; peer plums, black and yellow; quince-trees; raspis; reisons; small nuts: strawberries, red and white; service trees; wardens, white and red; walnuts; wheat plums.

Currants were not distinguished from gooseberries by any particular name at that period; and even in Gerard's time, they were considered as a species of the gooseberry. He says, in his account of the latter fruit, "We have also in our London gardens another sort altogether without prickes, whose fruit is verie small, lesser by much than the common kinde, but of a perfect red colour, wherein it differeth from the rest of his kinde."

Lord Bacon, who wrote about fifty years after Tusser, has noticed them: he says, "The earliest fruits are strawberries, cherries, gooseberries, *corrans*, and after them early apples, early pears, apricots, rasps, and after them damisons, and most kinds of plums, peaches, &c.; and the latest are apples, wardens, grapes, nuts, quinces, almonds, sloes, brierberries, hops, medlers, services, cornelians, &c."

Currants are a fruit of great importance in this country: they are so easily propagated, that every cottage gardener can rear them; and they are likewise so regular in bearing, that it is seldom they are injured by the weather. At the dessert, they are greatly esteemed, being found cooling and grateful to the stomach; and they are as much admired for their transparent beauty, as for their medicinal quailities being moderately refrigerant, antiseptic, attenuant, and aperient.—They may be used with advantage to allay thirst in most febrile complaints, to lessen an increased secretion of bile, and to correct a putrid and scorbutic state of the fluids, especially in sanguine temperaments; but in constitutions of a contrary kind, they are apt to occasion flatulency and indigestion. Brookes says, they strengthen the stomach, excite appetite, and are good against vomiting.

Besides the red and the white currant, the salmon colour, or champaigne, is cultivated for variety. The currant is a fruit that will ripen early, when planted in a warm situation, and may be retarded so as to be gathered in good condition in the month of November, when they are planted in a northern aspect: thus, with care, a skilful gardener will furnish a dessert of this fruit for six months, without the aid of artificial heat.

Currants will keep for years in bottles, retaining all their qualities for tarts, &c. if they are gathered perfectly dry, and not too ripe. They only require to be kept from the air, and in a dry situation. I have found it an advantage to pack them in a chest, with the corks downwards; and if the vacua be filled up with dry sand, it would insure their preservation.

The red currant gives the finest flavour for jelly.

The wine made from the white currants, if rich of the fruit, so as to require little sugar, is, when kept to a proper age, of a similar flavour to the Grave and Rhenish wines; and I have known it preferred as a summer table wine.—Even in London this agreeable beverage may be made at less expence than moderate cider can be bought for. Diluted in water, this wine is an excellent drink in the hot season, particularly to those of feverish habits. It makes an excellent shrub; and the juice is a pleasant acid in punch, which, about thirty years back, was a favourite beverage in the coffee-houses in Paris.

The best English brandy I have tasted, was distilled from weak currant wine, by a gentleman at Windsor; and I have no doubt but it could be made superior to the common brandies, imported from France, were it encouraged, and certain restrictions taken from the distiller.

The black currants, which were formerly called *squinancy berries*, on account of their great use in quinsies, are natives of Sweden and the northern parts of Russia, as well as the northern counties of England, where they have been found in their natural state, growing in alder swamps, and in wet hedges by the banks of rivers. In some parts of Siberia, the black currants are said to grow to the size of hazel-nuts. The inhabitants of that country make a drink of the leaves: in Russia a wine is made of the black currants; and it is also made in some parts of England.

The jelly made from these currants is recommended in most complaints of the throat: they are also esteemed cleansing, pellent, and diuretic: an infusion of the roots is useful in fevers of the eruptive kind.

The inner bark of all the species of the currant tree, boiled in water, is a popular remedy in jaundice; and some medical men have recommended it in dropsical complaints.

The currant-tree that was brought from the isle of Zante, by our Levant traders, and first planted in England in the year 1533, I conclude was the vine that produces the small grapes which we call currants, and of which the English use more than all the rest of the world together. This fruit grows in great abundance in several places in the Archipelago. We have a factory at Zante, from whence we import them so closely pressed by treading, that they are often obliged to be dug out with an iron instrument, the natives thinking we use them as a dye.

Currant trees produce their fruit on small snags, that come out of the former year's wood: in pruning, care should be taken not to injure that part; but the shoots may be shortened or thinned as soon as the leaves are off. They require least room, and have a neat appearance, in private gardens, when planted as espaliers; and the fruit is thought to ripen better.

(*To be continued.*)

TAXIDERMY, or the art of collecting, preparing and mounting Objects of Natural History, for the use of Museums and Travellers.

Sir, *Baltimore, July* 13, 1822.

I send to you, agreeably to my promise, the little volume entitled *Taxidermy*, which I have just received from England, and which from the cursory examination I have given it, appears to be a very useful *vade mecum* for those who have a taste for objects of natural history, and are disposed to collect them in their voyages and travels. I should imagine it would be creditable to the government to print a cheap edition of it, and furnish every ship of war, and every exploring party of the military with copies, as it would assist those who might have it in their power to enrich the museums of our Cities with the rarest objects in nature, by teaching them how to obtain and preserve specimens. In sending this book to you, however, I had chiefly in view that part of it which teaches the manner in which seeds, and other means of propagating vegetables, may be best preserved and conveyed, supposing you might wish to insert such information in your valuable Journal.

I remain, Sir,
Your most obed't serv't,
ROBERT GILMOR.

John S. Skinner, Esq.

VEGETABLE KINGDOM.

The riches of the Museum relative to botany consist,

1st. Of living vegetables cultivated in the garden.

2dly. Of a collection of dried plants or herbals, and all the products of the vegetable kingdom, which it is possible to preserve and make known.

The collection of a great number of foreign plants ought not to be considered as an object of luxury or curiosity. It is useful to the progress of science. Travellers have neither the time or facility of describing and drawing remarkable plants in the places where they gather them. It is only when they are cultivated in our gardens, that they can study them in all the periods of their vegetation, draw them when they are in flower, and try to multiply them, if their culture promises any advantages. We must not forget, that several foreign plants, which are now spread in other parts, were first cultivated in the Jardin du Roi. Every one knows that the coffee, which now grows in the islands of America, proceeded from a plant raised in our green-houses; and, still more lately, the bread-fruit tree has been sent from our green-houses to Cayenne. We must add, that a multitude of slips and seeds of ornamental plants have been cultivated in the Jardin du Roi, which are now become an object of trade, as well as several useful trees which now ornament our parks, and some of which have been introduced into our forests. In the Jardin du Roi we cultivate every plant necessary for study; and great attention is also paid to those which are useful or pleasing. When they fructify, we gather the grains, and distribute them gratuitously to all those whom we believe capable of multiplying and propagating them. We also give slips of those trees which have not yet borne fruit.

It would be extremely advantageous to bring living plants to the Museum; above all, those which are known to be useful in the countries where they grow: but the conveyance of living plants exacting much care and giving much trouble in vessels, we do not desire to receive any in this state, except those which cannot be propagated from grains, with the same qualities which a long culture has obtained from them; this number will always be very small.

The seeds should be gathered when very ripe, and then put into paper bags, with a note, indicating:

If the vegetable be a tree or an herb.

In what country it was gathered.

The nature of the soil where it grew.

The elevation of this soil above the level of the sea.

Its native name.

If it be used as food, in medicine, or in the arts; and if its history, and the properties attributed to it, offer any remarkable peculiarities.

We are particularly desirous of having notes on the vegetable poisons with which the natives infect their arrows, and the manner of gathering and preparing them.

To be certain of the maturity of seeds, we must gather them when they easily separate from the plant. In several instances, we may take the branch which bears them, that those which are not perfectly ripe may become so.

The bags containing the grains, well dried, ought to be put into a case covered with pitch, that they may be protected from, damp, insects, and mice.*

The oily grains lose their germinating faculty soonest. The seeds of tea, coffee, the glands of most of the oaks, are of this kind. These seeds should be put into sandy earth; we strew a depth of two inches of it at the bottom of a box, and we range the grains in this earth at distances equal to their size; we cover them with about an inch of earth, in which we put a fresh layer of seeds, and proceed in this way until within a foot of the top of the box; we must take care that the box is quite full of sand, that nothing may derange the seeds; the box ought to be covered, but in such a manner that the air may penetrate. We make an opening at the top, which we cover with a trellis of brass wire, to admit the air, without the mice or other animals being able to reach the earth. The grains germinate during their passage. When the case arrives at its destination, we find the embryos of the seeds are developed, and we immediately put them into a proper soil: it is in this way that MM. Michaux, father and son, brought to Europe so many species of oaks from North America.

Although certain seeds with a hard shell, such as walnuts, plums, &c. do not come up until a long time after they have been sown, it would be proper, when the kernel is oily, to follow the method we have pointed out, that they may not turn rancid on the passage. This precaution is also useful for the family of laurels *(laurinæ,)* and that of myrtles *(myrti,)* especially when the vessel has to cross the equatorial seas.

When we wish to send the seeds of a pulpy fruit, we must separate the grains from it; when the commencement of its putrefaction announces their maturity. We dry them, and place them in paper bags.

We now proceed to collections of dried vegetables, and other productions. It is by the help of the former, that we are able to know, compare, and describe plants, to distinguish their species, and contribute to the progress of botany. By their means alone, we can invariably fix the nomenclature and classification of vegetables.

The travels of several naturalists have already rendered the collection in the Museum very considerable, and certainly the richest in Europe; but it still wants many things; there are many gaps, which, in a few years, will be doubled, unless those who visit foreign countries will take some interest in filling them.

This collection, which already occupies four rooms in the Museum of the King, is composed of herbals, fruits, dried or preserved in spirits, gums, and resin, specimens of wood, and some other productions of the vegetable kingdom, which may be useful in medicine, or the arts. The trouble of enriching it is not so great as that required for the augmentation of zoological collections.

The plants which are destined for herbals ought, as often as possible, to be gathered in flower, and in fruit. When the plant is small, we take it entire, even with the root; when it is large, we cut branches fifteen inches long; we put the plants well extended between leaves of paper, under a board (using pressure to prevent them from curling up) which we do not remove until they have become flat. It is generally sufficient for their perfect desiccation, that the specimens should be separated by several sheets of brown paper. In humid countries and seasons, it is desirable to accelerate their dessication by an artificial heat. For that purpose, we put a number of plants between two planks, separated from each other by two or three sheets of paper, and place this packet in a stove or oven, after the bread is taken out; this quick method does not even alter the colours. When they are dry, we change the paper. There are some plants which are very watery, such as *bulbous plants*, *orchidæ*, &c. and which continue to vegetate in the herbals several months after they have been placed there. When these plants are gathered in the state in which we wish to preserve them, we plunge them for a minute into boiling water, then put them between two leaves of brown paper: they will afterwards dry quickly, as the action of the boiling water will have destroyed the life of the plant.

On each packet of plants of the same species, we put a note, indicating the name the plant bears in its own country, the height of the country above the level of the sea; in short, the same notes which we have required for living vegetables. These instructions are extremely important for the geography of plants, to the progress of which, Humholdt has so much contributed. It is also useful to notice the height of the plant, the colours of its flowers, and the odour they exhale, as these cannot always be learned from a herbal.

Dried fruits should be sent in cases, with a ticket which indicates the branch of the plant to which they belong. We do the same by gums and resins. Pulpy fruits should be sent in spirits, each in a separate bottle.

Herbals and fruits, when they are perfectly dry, should be packed in cases covered with pitch, to defend them from mice and insects; and it will be prudent to add a little cotton, imbued with oil of petroleum, or oil of turpentine.

It is also desirable to send specimens of useful woods. These specimens ought to be about ten inches long, and, if possible, the width of the tree; we also wish for a longitudinal and trans versal cut of the tree: but it is most essential to put a number on the wood, corresponding to the branch of the tree in the herbal, for botanists are still ignorant to what trees several of the woods belong which are articles of commerce.

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* *M. de Candolle recommended me to pack all seeds, collected in a moist country or season, in charcoal. Honey is also said to be a good preservative.*

Amongst the objects sent to us, we shall, doubtless, find many which we already possess; still they may be useful. There are plants in our gardens which have degenerated, the seeds of which it is desirable to renew. There are some which, with difficulty, fructify in our green houses, and the seeds of which are not in sufficient quantities to give to all those who request them. Thus, the *phormium tenax*, or flax of New Zealand, the fibres of which are much stronger than those of hemp, might be plentifully cultivated in several of our provinces, where it succeeds perfectly, although its seeds ripen with difficulty.

The plants preserved in herbals, which we already possess, may be employed in making exchanges with other countries, and thus establish one nomenclature.

Gums, resins, dye-woods, vegetable productions employed in medicine, can be analysed, and positive information given on objects which are now but imperfectly known. We must allow that, notwithstanding all our care, there are always some objects amongst our collections which are destroyed by time, and which it is useful to renew.

Collections of vegetables, from whatsoever country they come, always present something new; and there are some places so little known, that we desire to receive every thing which can be procured from them.

We will now give a brief list of a few objects which would be particularly useful.

The North of Europe.

The Lithuanian pine.

The Northern Coasts of Africa.

The lawsonia (Fam. salicariæ,) the leaves of which dye a yellowish red.

The oak with sweet acorns, (Fam. amentacea.)

The pyrethrum.

The sideroxylum of Morocco. (Fam. sapotæ.)

Senegal.

The gum-tree of Senegal.

The detar (detarium.)

The galega (Fam. leguminosæ,) and the indigoes which serve for dyeing.

The Cape of Good Hope.

The lilaceæ remarkable for the beauty of their flowers.

The proteæ and gardeniæ (Fam. proteaceæ et rubiaceæ.)

The Isle of France.

The true ebony wood.

Madagascar.

The vahè which yields the gum elastic.

The Levant.

The true hellebore of the ancients (heleborus orientalis, Fam. ranunculaceæ.)

The astragalus (Fam. leguminoseæ,) which yields the gum adragant.

The balm of Judea.

The seeds of the weeping willow (Fam. amantaceæ,) and a small plant of the male tree.

Persia.

The assa fœtida.

The willow called bismith.

India.

The salsaparilla of commerce.

The nelumbo (Fam. hydrocharideæ.)

The nepenthes.

The terminalia (Fam. elæagneæ.)

The canarium.

The mangostana (Fam. grettiferæ.)

The kaki (diospyros kaki. Fam. guaiacanæ or ebenaceæ.)

The rose laurel (nerium. Fam. apocyneæ,) which affords a beautiful dye.

The apocyneæ which yield the gum elastic.

The tree which produces incense, and which grows in the environs of Calcutta.

Carthagena.

The balsam of tolu, (toluifera balsamifera. Fam. terebintaceæ.)

Terra Firma and the Mouths of Oronooko.

The vessels which go to Martinique and Cayenne, having, as we have already said, frequent communications with Terra Firma and the mouths of the Oronooko, might easily procure us the plants we chiefly desire from these regions, by asking for them under the names by which they are known in the country.

From Cumana, branches in flower, and ripe fruits of the cuspa, which we call jesuits' bark (cascarilla,) and which we must not confound with the cuspara of the missions of Caroni. The cuspara furnishes the quinquinna (jesuits' bark) of Spanish Guyana, called in Europe, cortex angusturæ.

The vessels visiting the ports of Guaira and Porto Cabello might bring some branches in flower, and some fruits of the cow-tree (arbol de la vacca,) which resembles the chrysophyllum in the family of sapoteæ. This tree grows near Barbula, between Porto Cabello and Nueva Falencia. It will be highly important to bring also several well-corked bottles of this vegetable milk, which gives nourishment to the inhabitants.

Santo Thomas de Angostura, and the Mouths of the Oranooko.

The leaves, the flowers, the fruit, and the farina of the trunk of the moriche palm, celebrated amongst the Guaraunos Indians. A branch with the flowers, as well as the fruits, of the cuspara or quinquinna of Caroni (cortex angusturæ.) Branches in flower and fruits of the tree which affords the almonds of the Rio Negro, and which bears the name of almendron or juvia (bertholetia excelsa.) The branches, the flowers, and the fruits of the chickichik palm, of which they make cordage in the missions of Oronooko.

New Holland.

Cucalyptus and casuarina (Fam. myrti et coniferæ.)

Besides the collections of living vegetables, plants preserved in herbals, and products of the vegetable kingdom, the Museum possesses an assortment of tools, machines, utensils, and substances, employed in gardening, in agriculture, and in rural economy. This assortment, already very rich in the implements of the different nations of Europe, still requires the tools, &c. of other parts of the world. They would be received with pleasure and gratitude.

BOTANY.

General Observations.

The nearer we advance to the equator, the larger we find the plants. The most commodious size for the paper of the herbarium is from fifteen to eighteen inches long and eight or ten wide. We should be provided with several planks of the same size as our paper; these planks should be formed of two thinner ones, their surfaces being glued together; so that the grain of the wood of one may go length-ways, and the grain of the other breadth-ways, and without this precaution they are apt to break. We must have either a press, or a proportionate number of straps with buckles at one end, which will serve to press the packets of blotting-paper between the two planks. We should also have a tin box, and a large book of blotting-paper, with a loose back, shut with little straps, and capable of being carried into the form of a knapsack. This book and box will serve, during a journey, for a temporary herbarium.

When we are stationary, we take the plants from the book or box, and place them in sheets of dry blotting-paper; between each sheet containing a plant, we must be careful to place two or more dry and empty sheets, and then press the whole between the planks with the straps, and expose them in a dry, warm, and airy place. We ought every day to change the damp paper for dry, until the desiccation is completed. We may shorten this operation a little, by only changing the intermediate sheets, and always leaving the plant in that in which it was first placed; but in this case the number of intermediate sheets must be more considerable. When we plunge *saponaceous plants*, *lilaceæ orchideæ*, &c. into the hot water to destroy their vitality we must always except the flowers; and after this process, we must be very careful to change their papers.

Very delicate aquatic or marine plants require peculiar care: we must float them in a basin of fresh water, and then pass a piece of very strong white paper under them, by which we raise them slowly and obliquely, that they may remain attached in their natural position. If the plants are *extremely* delicate, we must use talc or glass.

When the fruits are of a dry nature, it is often more advantageous to leave them in their husks without sifting them; but when the fruit is fleshy, we must separate them.

When fruits are dry and coriaceous, they do not require any other preparation than being preserved in a dry place, not exposed to the sun; and those whose valves open with desiccation, must be tied round with a piece of strong thread.

If the trunk of a tree does not exceed a foot in diameter, we should cut a stump a foot long, retaining the bark, with its thorns or spines, if it has them. If the trunk exceeds a foot in diameter, we may choose a middle-sized branch for a specimen, if it does not differ from the trunk; but if it does, we cut the trunk longitudinally, so that we may have one-half or one quarter of its circumference, but always from the pith to the bark.

When we meet with palms, ferns, or any other monocotyledonous tree, we should procure a stump of a foot long, whatever the diameter may be. If the palm be branchy, which is very seldom the case, we must cut the trunk six inches below the ramification and six inches above. Travellers are particularly requested not to neglect any opportunity of collecting palms, tree ferns, dragon-trees (dracæna,) pandaneæ, or trees similar to these.

In cases where it is impossible to have a portion of the trunk sufficient to convey an idea, of its size, as the baobab, or the ceiba, we must take an exact note of the dimensions. The specimens of wood, when fresh cut, should be put to dry in places which are neither too dry, nor too warm, to prevent them from splitting.

Roots are only worth the trouble of collecting, when they present any thing remarkable in their structure, and then we take the same precautions as for woods.

Fleshy fungi ought to be treated like fleshy fruits, that is to say, preserved in spirits. Those whose nature allow them to be dried without much alteration, and *lichens*, ought to be treated like dried fruits; that is, either put into an herbarium, or dried apart. *Ferns*, *mosses*, *algæ*, ought to be dried and put into an herbarium. If time be wanting, the *mosses* may all be mingled together, and arranged after their arrival.

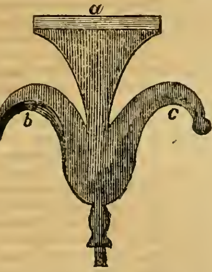
In the present state of science, travellers ought to pay great attention to the collecting small *cryptogamia* which spring on living vegetables. The greater part of the spots or excrescences which we see upon leaves, stems, or fruits, are worthy of being gathered and preserved. In this case, we ought to gather the leaf charged with the parasite, and a branch in flower of the same tree, to know its species.

Travellers will render an important service to science, by carefully collecting the monstrosities or permanent accidents of vegetables; such as the natural union of the organs of the same plant, which are generally separate; the organs which are abortive or altered in their form, their number, or appearance. These cases being out of the general rule, we cannot prescribe any precise method for their preservation; we can only observe, that at the side of each monstrous or diseased specimen, another ought to be added of the same species, in its usual state, to serve as a comparison.

By the side of our drawings, it is desirable to place a sketch of the general appearance of the whole individual; and if it be a tree, to add a scale of the size.

In our descriptions, if accustomed to the technical details of botany, we should be careful to note those particulars which are not easily seen in an herbarium, such as the exact insertion of the parts of the flower and the fruit, especially when the organs are very small; the precise construction of the grain, &c.

In climbing plants, when any species are found which resemble European, it is particularly necessary to notice which way they twist around their support; the traveller, supposing himself in the place of the support, his face turned towards the south pole, to ascertain if they ascend from right to left, or from left to right.



An instrument for the convenience of travellers, the upper edge of which, *a*, is sharpened for cutting specimens of the wood from the trunks or larger branches of trees; *b*, edged for severing the branches out of reach; *c*, blunt for hooking them down, for the sake of the leaf, fruit, or flower. This, with a small spade for digging up plants, may be carried in the waistcoat pocket, and the same handle will serve for them both.

* * *

Cattle Show and Fair, No. 3,

FOR THE EXHIBITION AND SALE

Of all kinds of Live Stock, Agricultural Implements, and Domestic Manufactures.

To be held at EASTON on the Eastern Shore of Maryland, on Thursday the 7th, and Friday the 8th days of November next, to commence at ten o'clock, in the Morning of each day.

The committee appointed on behalf of the "Maryland Agricultural Society," to make arrangements for a Cattle Show and Fair, for the Exhibition and sale of Live Stock, Agricultural Implements and Domestic Manufactures, have resolved that the said Show and Fair, be held at the place and times above mentioned, and that the following premiums be offered and awarded to the owners of the best kinds, that is to say:—

HORSES.

For the best Stallion,	$20
the second best,	15
the third best,	10
For the best Mare,	15
the second best,	10
the third best,	5

ASSES AND MULES.

For the best Jack,	15
the best Mule,	10
the second best,	5

CATTLE.

For the best Bull over two years old,	$20
the best Bull under two years old,	15
the second best bull under two years old	10
the third best do.	5
For the best milch Cow,	15
the second best,	10
the third best,	5
For the best Hiefer under two years old,	10
the second best do.	5
the best best yoke of Working Oxen,	15
the second best do.	10
the best stall-fed Beef,	10
the best grass-fed Beef,	10

SWINE.

For the best Boar,	$8
the second best,	6
the third best,	4
For the best Sow,	8
the second best,	6
the third best,	4

SHEEP.

For the best Ram,	$8
the second best,	6
For the best Ewe,	8
the second best,	6
For the two best Wethers, over two years old,	5
the two second best do.	3
For the two best Wethers, under two years, old,	5
the two second best do do.	3

IMPLEMENTS OF HUSBANDRY.

For the best Plough,	$5
For the best Harrow for the cultivation of Indian Corn,	5
For the best machine, or model of a machine for preparing unwretted Flax, for the wheel,	20
For the best machine or model of a machine for threshing out wheat, and other small grain; the cost of which shall not exceed $100,	25

DOMESTIC MANUFACTURES.

For the best piece of Kersey, not less than 10 yards,	$5
the best piece of Flannel, not less than 10 yards,	5
the best piece of Cassinet not less than 10 yards.	5
the best piece of carpeting not less than 20 yards,	5
the best hearth Rug,	3
the best Counterpane,	3
the best piece of Sheeting, not less than 12 yards,	3
the best piece of Table Linen, not less than 10 yards,	3
For the best piece of Towelling, not less than 10 yards,	3
the best pair of knit woollen stockings,	1
the best pair of knit cotton stockings,	1
the best pair of knit thread stockings,	1
Each of a size for men or women.	
the best sample of Butter, not less than five pounds, a butter knife with a silver blade of the value of	5

A statement of the manner of preparing the cream and butter will be desirable.

The above premiums will be awarded only for animals bred within the State of Maryland, or within the District of Columbia. But male animals of the several kinds above specified may be entitled to premiums, though bred out of the State and District, provided the owner of such male animal shall secure his continuance in the State of Maryland, to be bred from, for one year from the granting of the premium.

It is to be understood that whenever a premium for any specimen of Agricultural Implement, piece of Machinery, or article of Manufacture, may be claimed *merely from the want of competion*, or where the thing presented for premium shall be considered as possessing no merit worthy of encouragement, the Judges shall have a right at their discretion to withhold such premium.—But this regulation shall not extend to Live Stock, as the best offered will gain the premium without any exception.

In no case will a premium be given for Live Stock, unless the owner shall have notified Mr. Samuel T. Kennard, of Easton, of his intention to offer for the same, and shall have entered the particular animal with him ten days previous to the Exhibition, stating himself to be the owner of such animal, and the manner of feeding and rearing it, together with its pedigree, disposition and other qualities as far as practicable.

Persons having fine animals, though not intended to be offered for premiums, will gratify the Society by exhibiting them in their field. And for the purpose of preparing proper arrangements, and stalls, for the accommodation of all stock offered for premiums or for show, it is requested that all persons intending to offer stock for show only, as well as those offering them for premium, should give notice to Mr. Kennard, of such intention at least ten days prior to the Exhibition.

All Premiums awarded by the Committee of the sum of ten dollars and upwards shall be distributed in articles of Plate; and Premiums below the sum of ten dollars shall be distributed in money or medals: and the Committee, to whom the charge of these regulations shall be entrusted, shall determine the nature and devices of the plate and medals so to be distributed.

Sales of the Stock and articles exhibited, will take place on the second day either at public or at private auction.

By order of the Committee,
N. HAMMOND, *Chairman.*
SAMUEL T. KENNARD, *Secretary.*
Easton, August 13th, 1822.

☞ Editors of papers in this State and the District of Columbia, who are disposed to promote the interest of Agriculture, are respectfully requested to insert this notice in their respective Journals

* * *

Selections from late numbers of the London Farmers' Journal, received at the Office of the American Farmer.

Kinlet Agricultural Meeting and Sale took place on Monday, the 1st of this month, of which the following particulars have been transmitted to us:—None of the New Leicester Ewes or

Theaves sold for more than two guineas a-head; but the North Devon Cattle found ready purchasers at good prices; a proof of the estimation in which they are held. Two-year old in-calf Heifers sold at from £20 to £46 each, and Steers, of the same age, as high as £37 a pair. Mr. Childe's draft of Devon Cattle only, amounted to upwards of £1,080. His Grace the Duke of Norfolk, Lord Ongley, Lord James Fitzroy, Sir John Wrottesley, Bart., Sir John Boughey, Bart., M. P., Sir Anthony Lechmere, Bart., Sir Edward Blount, Bart., and Mr. Edward Blount, W. W. Whitmore, Esq., M. P., W. Roberts, Esq., M. P., W. Lloyd, Esq., W. Owen, Esq., Col. Gatacre, —— Morgan, Esq., Ed. Lloyd, Esq. G. Tollet, Esq., Thomas Hill, Esq., the Rev. W. Otter, Thomas Botfield, Esq., J. Compton, Esq., and Messrs. Walker, Crump, Crane, Cartwright, Potter, &c. were present at the sale. We are happy to hear in this communication, that *burnt clay* has been used on some poor tenacious lands belonging to Mr. Childe, with the most beneficial effects: land of this sort, which never let so high as 4s. per acre, by draining and dressing with clay ashes, is said to have produced 46 bushels an acre of Wheat this season; and in every instance of its being so used, the advantage has been similar.

ON THE IMPROVED BREED OF SHORT-HORNS.

Marton Lodge, near Stockton on Tees, June, 28th, 1821.

Sir,

In answer to your correspondent whose letter appeared in *The Farmers' Journal* of the 25th inst. under the signature *H*, I beg to assure him that I shall be happy to impart all the information in my power on the subject to which he refers, for I agree entirely with your other sensible and respectable correspondent, Mr. Rooke, whose letter to you appeared in the same Journal, that *open* and *liberal* discussion elicits truth and promotes public utility.

I am in possession of evidence which establishes the fact that the *dam* of Hubback owed her propensity to fatten to an admixture of Kyloe blood, and perhaps this letter will, for the first time, communicate publickly, that the *sire* of Hubback had an admixture of Alderney or Norman blood; Hubback, therefore, who was the main root of the improved Short-Horns, united three crosses, viz: the Dutch or old short-horned, the Kyloe, and the Norman or Alderney.

The sire of Hubback was descended from the stock of Sir James Pennyman, who obtained the breed from Sir Wm. St. Quintin. I was intimately acquainted with Sir James Pennyman's steward, who has repeatedly assured me, that Sir James told him that this breed was a cross between the old Short-Horns and the Alderney. Some time ago I happened accidentally to read the *New Farmers' Calendar*, fourth edition, 8vo. published in the year 1802, in which at page 393, is the following passage:—"Yorkshire is famous for the Holderness or short-horned cows. This large breed came originally from Holstein and the low countries, and were until of late years too coarse and Dutch built; they have been much improved in symmetry, and fineness of bone and flesh, by a judicious cross with the Norman cattle; for this improvement I understand the country is indebted to the exertions of the late Sir William St. Quintin. They are now very excellent and beautiful stock, and many of them are made fat at three years old."

Such then being the pedigree of Hubback, it follows that the *improved* Short-Horns are a *mixed breed*, the result of judicious crossing. Hubback was the sire of Fuljambee's dam. Fuljambee was the sire of Old Phœnix and of Lord Bolingbroke. Lord Bolingbroke was the sire and Old Phœnix the dam of Favourite; Favourite was the sire of Comet, and Comet's dam was by favourite, out of Old Phœnix. Hence Comet was full of Hubback's blood, and was of course of a mixed breed. This fact furnishes an experimental proof of the expediency of judicious crossing much stronger than any theoretical argument. It is unnecessary to mention that Comet was sold by public auction for 1000 guineas.

Having thus given your correspondent *H.* one practical illustration of the effects of crossing, I will add another equally strong and remarkable. The late Mr. Bakewell, it is well known, was the founder of the breed of sheep called the Dishley or New Leicesters. From the secrecy of his proceedings, their origin was for a long time unknown to the public, and I do not remember ever yet reading in any publication, any acount of their origin. It is now, however, known to the most eminent breeders of the Dishley sheep, that they were a *cross between the Lincolnshire and the Peak of Derbyshire breeds of sheep*. Mr. Robert Colling, who was one of the earliest disciples, and a most intimate friend of the late Mr. Bakewell, told me that Mr. Bakewell once communicated to him their origin. One of the most eminent and most respectable of the present Leicestershire breeders has confirmed to me the above account of their origin. Mr. Bakewell, I believe, has let a ram of this breed for 1000 guineas the season.

Thus then I have given your correspondent *H.* two striking and memorable instances of crossing, and I need uot, therefore, add another word on that subject.

I will not quarrel with your worthy correspondent Mr. Rooke, for the preference which he gives individually to Mr. Mason's stock. I will only remind him, that the humble writer of this letter had the honour to purchase Petrarch and Countess, and Lily and Peerless, at the Ketton sale, in 1810; and I beg to assure him that I shall have a great pleasure in showing their produce to him, and in giving him a sincere and hearty welcome if he will honour me with his company.

I am, Sir,
Your humble serv't,
BART. RUDD.

ALLITERATION.

The admirers of alliteration will be pleased with the following character of a young lady, from an old *Newcastle Journal*:—"Died, in the flower of her age, Miss Mary Harrison, daughter of the late Mr. Harrison, of Wheldon-bridge-house. If *b*oundless *b*enevolence *b*e the *b*asis of *b*eatitude, and *h*armless *h*umility the *h*arbinger of a *h*allowed *h*eart, these *C*hristain *c*oncomitants composed her *c*haracteristic, and *c*onciliated the esteem of her *c*otemporary acquaintances, who *m*ean to *m*odel their *m*anners by the *m*ould of their *m*eritorious *m*onitor." There are but two instances in our recollection which approach near to the above: the one is, "*H*enry *H*allam, *h*atter, *h*osier, and *h*aberdasher, at *H*olborn-bridge, *H*atton-garden;" the other "*B*enjamin *B*ell, *b*rown *b*read and *b*uiscuit *b*aker, near *B*attersea-*b*ridge."—There is another on Cardinal Wolsey, better than either:—

"*B*egot *b*y *b*utchers, *b*ut *b*y *b*ishops *b*red,
"*H*ow *h*igh *h*is *H*onour *h*olds *h*is *h*aughty *h*ead."

The Hon. F. G. Howard has this year grown, in his garden, at his seat of Elford Hall, in Staffordshire, a bunch of white grapes which were of the extraordinary weight of *fifteen pounds*.

A summer-house, in the grounds of Mrs. Garrick, at Hampton, was broken open and robbed on Friday night se'night, and the carpet and various articles of furniture taken away. Very fortunately one article, which its original owner had highly valued, was left behind, on account of its cumbrous dimensions and weight. This was a large arm chair, made by the direction of David Garrick, out of a celebrated "mulberry tree," planted by Shakspeare.

The blood horse which won the match on Chatham Lines on Monday week, by performing ten miles in 27 minutes, was backed to go a mile in two minutes on the same piece of ground on Thursday se'night, which he lost by three seconds. It is generally thought that the horse would have gone the distance within the time, had it not been for the unfavourable state of the weather.—*Kentish Gazette*.

FOR THE AMERICAN FARMER.

"GOVERNOR WORTHINGTON'S FLORIDIAN ORANGERY."

St Augustine, (East Florida)
June, 10th, 1822.

One of the most profitable ways of investing money near this city, and in most parts of this province, for a person who is both able and willing to wait for the interest of his money, and principally for a father of a family, is by establishing an orange-grove, because time and almost time alone will suffice to make it extremely valuable. Such an establishment requires only the investment of a small capital, and the attendance of only two negroes, working under the direction of an intelligent white man, or man of colour. It will yield, in time, (considering the smallness of the sum invested, and the few hands which are wanted) a greater reward than any agricultural produce raised or known here, cotton, and even the sugar-cane not excepted.

1. The seed of the China or sweet orange tree, planted here on a suitable spot, will show its two first leaves in 6, 7, or 8 weeks, according to more or less rain received.
2. That young tree will require an easy attendance during the three or four first years, to prevent its taking a bent, and forking or branching out too soon. Often also, the slender stem will want that a prop or guide be given to it, in order that it may grow straight and of a proper shape.
3. When 6, 7, or 8 years old, it will yield from 25 to 50 oranges.
   When 9, it will yield 100 and upwards, and thus go on increasing every year.
   When 15, it will yield from 5 to 600 oranges, and
   When 20, which is its prime, though not its full growth, 1000 oranges.
   When 30 years old, it will, if having always been thriving, yield from 1600 to 2000, and so go on increasing with age till it will yield as many as 6000 oranges, every fruitful year, as many trees do in this province. That tree lives generally here 100 years, or a little more, and then decays gradually.
4. Oranges sell here generally at 10 dollars a thousand, in September and October, and at $12 50 cts. in November and December.
5. Were the owner to have his oranges boxed up properly, (only 200 in a box, in which state they would keep 3 months) and exported to Philadelphia, New York, or Boston, he could always count upon an average sale of from 15 to 20 dollars a thousand, all expences paid, and all deductions made for the oranges which

might be rotten. He could also gain always from 5 to 10 per cent, on the employment of his funds being sent back here.

6. A square of 6 acres (261,360 feet, or 510 feet square) will contain 400 orange-trees, planted in 4 clusters, A, of 100 each, at 20 feet distance from each other, and will afford in the centre a suitable place for a two story dwelling-house, B, 54 feet long, North and South, and 18 wide inside for three rooms above and two galleries in the length way of the house; space also for four walks, C, 80 feet wide, from the four gates F, to the house, and a walk D, of 34 feet wide in four directions along the four fences, (leaving one foot for the fence) and consequently surrounding the four clusters above mentioned of 100 orange-trees each.

On each side of these walks, grape-vines, young orange-trees from seed and for sale, and all kinds of vegetables may be planted, and yet leave a convenient road in the centre for the carts to move in. Vegetables may also be planted in beds, 6 feet wide, taken out of the centre of each North and South walk which is between the trees, and there are thirty six such walks.

Each of the four clusters, of 100 trees each, ought to have a well, E, in its centre, the dwelling house, of course, must have one also.

The lower part of the house, (after reserving two rooms for cooking and for washing and ironing,) ought to be kept for receiving, drying, and packing up the crop: also to lodge the overseer and the labourers: to shelter the carts, and a chaise if used: to store the implements of horticulture, the lumber for the boxes for oranges, to receive the benches of the carpenters making them, the boxes made, &c.

The stable for two horses and two cows may be built against the fences, and also some lodging rooms, for the people.

The dwelling-house, and out houses, the stable, &c. ought to be built only with the proceeds of the sale of the oranges. The ground and its fences only ought to be bought and made at first, with a small house of 100 dollars for the overseer, and one hut or two for the labourers, until the orange-trees yield a crop.

7. Such a grove as this, would, when the 400 trees become twenty years old, (and supposing them to be in a thriving state) yield at least 3000 dollars a year, and if the fruit was exported with due care ——from 4 to 4,500 dollars, without reckoning the proceeds of the sale of the grapes, young orange-trees, and vegetables, which might be raised at the same time.

8. An intelligent and industrious man, something of a gardener, with two or three negroes, will suffice to attend such a grove, and also the garden, except in the time of the crop of the oranges, when a greater number of hands will be wanted during two or three days, from time to time to gather the fruit.

9. A better plan than that of raising such a grove from the seed, would be (as small sweet-orange trees cannot be procured here) to plant 400 straight and healthy sour-orange trees of four or five years of age, (which are abundant here) and ingraft on them the buds of such China orange-trees as are known to yield very sweet oranges.

This would advance the crop four or five years, but would cost more money. The former plan, therefore, ought to be pursued if economy be the principal object, and the latter plan if the saving of time be the main point.

The form which I would recommend, as the most eligible, for such a grove is given below.

10. What I have stated, is derived from men of practical experience, and is good in all its parts, I believe, however, a square of ten acres (or 660 feet square) would be far preferable in as much as it would enable the owner

To place his 400 orange-trees at 26 feet distance from each other instead of 20.

To make his 36 beds for vegetables, between the 400 orange-trees, much larger;

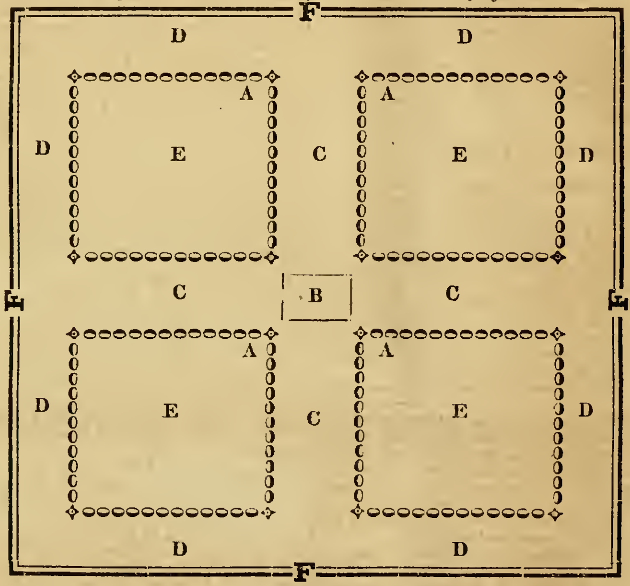
the same in the four walks converging to the house;

the same in the four walks along the fences;

To have more room for stables, pens, store-rooms, and lodging rooms along the fences.

To cultivate more grapes, more vegetables, and to have more orange-trees raised from seeds, and for sale every two or three years, and finally to procure to his 400 standard orange-trees, and whatever else he would raise, more air, heat, and light, which, with moisture, are well known to be the great promoters of a strong vegetation.

Figure of the Grove of 6 Acres, or 510 feet square. *One of 10 Acres, or 660 feet square, is far preferable.*



FOR THE AMERICAN FARMER.

ON DEBARKING FRUIT TREES.

Nottoway, July 18th, 1822.

Dear Sir,

In your 13th Number, I notice some observations on the subject of barking fruit trees. If the following experiment can be of interest or amusement, you may dispose of it as you like. Although not conducted by myself, I have frequently seen the subject of it, and from the well known character of the gentleman, I will pledge myself for its correctness and accuracy. In the summer of 1816, there were several apple trees growing in his yard, which had been transplanted about three years. Having heard from some source that a tree barked under particular circumstances, would not only not die, but would be improved by it, he was induced to test it on one of his, the fruit of which was not much admired. Accordingly on the 20th of June he very carefully stripped it from the limbs to the ground, laying bare the whole extent of the body. The utmost care however, was taken to prevent the knife from wounding the delicate fibres of the wood.—Not a leaf withered, nor did the appearance of the fruit, or any other circumstance indicate the least deterioration.

It was very soon apparent that a smooth and delicate skin was supplying the place of that which had been removed, and which retains its smoothness at this time. Acquiring confidence from his late experience, he ventured the subsequent June to repeat the operation on the remaining trees on that side of the yard with similar results. The trees are very flourishing, and the fruit very good, as I had an opportunity of witnessing to day.

Though this experiment fairly proves that the trees will not be in the least injured by this management; yet it by no means establishes the fact that they will be improved by it. In this case the trees stand in a yard well set with grass and weeds, which probably checked their luxuriance, whereas, if they had been in ground occasionally cultivated, with some others interspersed, on which the experiment had not been made, the effect would probably have been more apparent. May not the Botanist make curious deductions relative to the circulation of the sap from these facts?

Your's &c.
W. J. DUPUY.

TUNISIAN SHEEP.

We have great pleasure in recording the following authentic history of an importation of Tunisian Sheep, and we particularly desire that our correspondents would furnish us with accounts, as detailed, respecting every importation of Live Stock, which has come within their knowledge; and especially, when the facts so conclusively demonstrate the tendency of agricultural pursuits and subjects to inspire all who embark therein, with a liberality of feeling and design which, so far from admitting the idea of venal rivalry or sordid monopoly, bid every one generously welcome to the fair enjoyment of new sources of profit. *Edit. Am. Far.*

Belmont, August 14, 1822.

Dear Sir,

In your paper of the 2d instant, I see queries respecting the Tunis Broadtailed Sheep. "*How many were received? and were any sent into other states?*"

I have given a full account of these sheep in the 2d volume of the *Philadelphia Agricultural Memoirs.* My opinions continue unaltered; and I had supposed the subject to have been exhausted. I have no desire to revive it, further than to answer your queries as fully as historical facts require; and *that* with no personal objects. I do not relate the circumstances to blazon my own exertions; but under a persuasion that a useful moral may be drawn from them. I am the only person acquainted with the whole subject, to which I do not mean to give more importance than your inquiries seem to elicit. Col. *Pickering*, with his accustomed candour, has published, in *Poulson's* paper of the 4th or 5th of July last, what he thought proper as to himself. The paragraph has not his signature; but he informed me of his having written it; and I mention it, for reasons operating with me.

I understood, *from Gen. Eaton*, and so did Col. *Pickering*, that eight or ten sheep were shipped; but only a pair arrived. Being far preferable to the coast sheep, they were procured by Gen. *Eaton*, (as he informed me,) off the Dey's farm in the interior of the country, by the Dey's permission, as a compliment to the United States. It was therefore proper that they should pass under the direction of the Secretary of State. They arrived in the *Delaware*, in a public ship; and of course, were placed by Col. *Pickering* in the neighbourhood of the port of arrival. It would have been out of character with him, (only one pair having arrived) to have sent them into any other state; nor would he have so done, in whatsoever way he might have received them. I was informed that the rest of the shipment perished at sea. Capt. *Geddes*, to whose care they were committed, had a character too respectable to permit any supposition that he was either negligent or selfish; yet Gen. *Eaton* expressed much dissatisfaction and chagrin.

The burthensome, though not regretted, deposit, was put into my hands by Col. *Pickering*. Considering myself as a kind of trustee; and always desirous of spreading through our country the benefits of such acquisitions; I refused offers of emolument; though no terms forbidding personal profit, were made. I gratuitously dispersed the breed, not only in Pennsylvania, but into the neighbouring states; at no small trouble and expense to myself. Several victuallers, finding the superiority of the mutton over that of all other sheep, both in quality and price, made up a purse and offered any sum I chose to fix for the Ram. I refused the proffer; and after his covering, during several seasons great numbers of ewes sent to my farm; and there pastured and served without charge; he was conveyed to my late friend, Gen. *Hand's* farm, near Lancaster; where he was killed by dogs; after propagating the breed extensively. The ewe met the like fate, on my farm; having yeaned a healthy lamb, at sixteen years of age.

Chancellor *Livingston's* sale of two *Merino* sheep for $3000, gave impetus to the ardour which had begun to operate in favour of that breed. Had he *given* them away, the effect would have been far otherwise, on the minds of both farmers and speculators. *Voila les hommes!* Fancy paints profits in proportion to price paid. Small gains are counted on gifts, or cheap purchases.

Discovering the impolicy of continuing (however beneficial my distributions may, at first, have been,) gratuitously to bestow lambs; and of my other modes of dispersing the breed without charge; I encouraged my neighbour, *Thomas Bones*, in raising fine Broadtailed Sheep, from my stock, for sale on his own account. He did great justice to my confidence in him; and sold considerable numbers; many whereof, at their request, I selected for the purchasers. Many were sent to *South Carolina*, as I mention in our volume. *The credit of, and demand for the sheep, were really enhanced by the prices paid for them;* though those prices were moderate, indeed: compared with those of *Merinos;* which overwhelmed the *Tunisians*, in public opinion, during the Merino-fever.

Country people do not value an article *given away;* presuming that it is held by the donor in small estimation; and in this they are not singular. The usual short sighted practice among farmers, of selling to victuallers, or in the market the best lambs and sheep; and keeping only those unsaleable; deteriorated the breed most lamentably. My tenants, who had the charge of my flock, had their share in this culpable propensity. Several butchers posted breeders from my stock, in *Jersey* and *Delaware.* The progeny were slaughtered for the market. This also diminished the multiplication of the breed. Yet I was surprised by the information I frequently received, at the numbers produced from an original pair, even under circumstances not always encouraging.

I know of no other importation of Barbary sheep, contemporaneous with the subjects of this account. Long after the arrival of the pair mentioned; I was informed that Capt. *Baron* had brought some *broadtailed coast sheep* into Virginia. But from the accounts of them I had heard, they were inferior to the Mountain sheep of *Tunis:* and so are all other African sheep which have fallen under my notice. The sheep of the Eastern countries, Asia and Africa, are generally (with some exceptions,) broadtailed.

Many years ago I saw, in England, in the King's flock at Richmond, several of the *Laticandæ.* Some of them with cumbrous trailing tails, borne on little wheel carriages, dragged after them. None of them, in appearance, equal to the Tunis Mountain sheep. In my old, learned, and valuable work,—*Scheuchzer's Physica sacra,*—there are plates, admirably executed, of victims for the Jewish altars. Among them, trailing Broadtails similar to those I saw at Richmond. So that there are many varieties of the *Laticandæ;* and the success of breeders entirely depends on the selection of the valuable kinds.

The name, (as you seem to require it,) I gave to the Ram, was *Caramelli*, that of the Ewe, *Selima.* They will, perhaps, become memorable, as the first emigrants to our country, from this branch of the extensive family of the *Laticandæ.*

Not Knowing, exactly, the object of your queries; I may have enlarged unnecessarily. But you may gather what you deem satisfactory; for any purpose you contemplate. Yours truly,

RICHARD PETERS.

John S. Skinner, Esq.

ERRATA.

Our readers will please make the following corrections in the Address of Col. Thomas Emory, page 153, first column, third ¶ read, *and* "being unambitious,"—same column bottom ¶ read, *acknowledged* "impediments,"—page 155, 2d column third ¶ read, "inadequate to" *the* "effect,"—page 156, third column, fourth ¶ read, *creating* "and applying manure."

University of Maryland.

THE MEDICAL LECTURES will commence as usual on the last Monday of October next, and be delivered—

Surgery, by John B. Davidge, M. D.

Theory and Practice of Physic, Nathaniel Potter, M. D.

Chemistry and Mineralogy, Elisha De Butts, M. D.

Anatomy, Granville Sharp Pattison, M. D.

Materia Medica, Samuel Baker, M. D.

Midwifery, and diseases of women and children, R. W. Hall, M. D.

Institutes of Physic, Maxwell M'Dowell, M. D.

By order of the faculty,
GRANVILLE SHARP PATTISON, *Dean.*

THE FARMER.

BALTIMORE, FRIDAY, AUGUST 23, 1822.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour from the wagons, $6 25 cts. to 6 50—Wharf do., $6 25 cts. cash—Wheat, white, $1 20 to $1 30—Red do., $1 15 to 1 22—White corn, 62 to 64 cts.—Yellow do,. 62 to 64 cts.—Rye, 50 cts. —Oats, 30 to 35 cts.—Shad, trimmed, No. 1. $8 to 9 —Untrimmed, No. 1 do., $7 to 8—No. 2, do. $6, dull—Herrings, No. 1, $3 50—No. 2, $3—Beef, Northern mess per bbl. $10 to 10 25—Baltimore, prime do. $9 to $9 75—Hams, 10 to 12 cts.—middlings, 6 to 8 cts.—Cotton, West India, per lb. according to quality, 15 to 25 cts.—New Orleans prime, 16 to 18 cts.—Georgia, upland, do. 14 to 16 cts.—Cheese, N. England, 12 to 15 cts. scarce—Coal, Virginia, per bushel, 25 to 30 cts.—English do., 40 cts.—Flax per lb. 10 to 10½ cents—Hops, fresh, per lb. 10 to 12 cents—Hogs' lard, per lb. 9 to 10 cents—Hides, E. Shore, per lb. 8 to 10 cents—Leather, soal, per lb. 24 to 25 cts.—Upper do., whole hide, $3 to $4 25—Salt, St. Ubes, per bushel, 50 cts.—Cadiz, do. 42 cts.—Liverpool, blown, 40 cts.—Ground do. 50—Turks' Island, 60—Wool, Merino, full blood, per lb. 35 to 40 cts.—Do. mixed, 28 to 30 cts.—Common country do., 20 to 20 cts.

Maryland Tobacco—common kinds very dull—bright yellow, none in market.

PUBLIC LANDS,

Appropriations of, for the purposes of Education, *in* all *of the UNITED STATES.*

We some time since received a copy of the proceedings of the Massachusetts Legislature, in reference to the Maryland Resolutions on the interesting subject of providing adequate funds, in *all* of the United States, for the purposes of Education, by appropriations of a small portion of the public lands; and we would have published it before now, if we had not lost our copy. When we first missed this, a friend and neighbour promised us the use of his copy, and some reflections which he had made on the subject, whilst he was reading and comparing the two reports. We freely accepted his offer, and now give place to the Massachusetts proceedings and our neighbour's notes; these must clearly elucidate the Maryland proposition, and they oppose to the Massachusetts objections, most powerful reasons for its adoption.

At the first blush of this project it appeared to us so fair, and its object so commendable, that we gave to it our ready approbation, nor entertained a doubt as to the justice of the Claim, until its opponents alleged, that "for "the school lots reserved in the New States an "equivalent consideration had been given to the "Nation by the purchasers of public lands:" but the examination of this point, so far as we have yet been enabled to carry it, leaves upon our mind the most distinct conviction, that an equivalent price not only has not been received or stipulated, but also, that it never was supposed, by the purchasers of public lands, that they were either paying or promising one.

We thus frankly submit the matter to the consideration of our readers; who will feel a lively interest in the progress of a discussion that connects itself so immediately with the all important subject of *general* education.

Edit. Am. Far.

COMMON WEALTH OF MASSACHUSETTS.

In the Year of our Lord 1822.

The Committee of both Houses of the Legislature, to whom at a former session, was referred a Message of His Excellency the Governor, communicating sundry Resolutions of the Legislature of the State of Maryland, relative to the appropriation of a portion of the Public Lands of the United States, in certain cases, to the encouragement and support of Common Schools, and other Seminaries of Learning; and to whom also, was referred that part of the several communications of His Excellency to both Houses, at the present session, relating to the same subject, and transmitting sundry Resolutions of the States of Vermont, New Jersey, and Kentucky, relative to the same, having according to order, had the same under consideration, thereupon ask leave, respectfully, to submit the following

REPORT.

The encouragement and general establishment of Common Schools and the universal diffusion of the means of education among all the people of this Union, is unquestionably one of the most interesting and important objects, which can now attract the attention of an American statesman. The principle upon which the structure of government in these States, is founded, both in their separate and in their collective capacity, is that of representative democracy. Government is established by the general will, and designed for the general good. The great body of the people not only virtually hold, but actually exercise a great portion of that power, which puts in motion all the springs of government. It is essential therefore, that the great body of the people should be so far enlightened and instructed, as to enable them to make a judicious selection of representatives, to inform and interest themselves in the course and tendency, the justice and policy of public measures, and to form some just estimate of the character, conduct, and motives, of those, to whom they have confided their political power and their civil rights. Rulers also, should at all times be able to feel, that they may rely with safety and confidence upon the strength of enlightened public opinion, to sustain them in the adoption of all such measures, as justice, honesty, and the best ultimate good of the people, may require. In a state of society and system of government, supported neither by accumulated wealth, hereditary distinctions, or military force, a correct and enlightened public opinion alone can be relied on, to furnish that moral and intellectual power, which is necessary to give activity and efficacy to public measures, and thereby to secure the objects of all government, the protection, liberty, and happiness of the people. But where so large a portion of power is necessarily entrusted to the great body of the community, should the rising generation be suffered to grow to years of maturity, without education, and the majority of the people thus become ignorant, stupid, and depraved, it is quite apparent that, through the arts of designing and unprincipled men, they would soon become the victims of intrigue, and the instruments of violence. It is quite manifest therefore, that a representative republic cannot be prosperous and powerful, except among an educated and enlightened people.

These considerations are fully sufficient to awaken a lively interest, and to ensure the strictest attention to every proposition, which contemplates the promotion of the means of general education. Your Committee, at the same time, are conscious of the propriety and duty of subjecting the principles of every measure, which is proposed for the adoption of the Legislature, to a strict investigation, with a view of ascertaining whether it rests on the safe grounds of justice and expediency. They are sensible that this Legislature representing the people of the Commonwealth, and the Congress of the United States, whose interposition it is proposed to invoke upon the present occasion, for the purpose of obtaining the object in question, do themselves exercise but a limited and delegated power, entrusted to them in certain measures, and for specified purposes; that it is therefore necessary to be assured, not only that such object is desirable, but that it is just, practicable, expedient, and within the authority of those who are called upon to adopt it.

By the Report and Resolutions of the Legislature of Maryland, a claim is made upon Congress, in behalf of the old thirteen States, together with Maine, Vermont, and Kentucky, formed out of territory which has never been the property of the United States, to the exclusion of the new States, for a very large grant of Public Lands, for the purposes of education. This claim is asserted and urged, as one, not of favour, but of justice, and one therefore, which, if well founded, Congress is bound to grant, without regard to any considerations of convenience or expediency.

There seems to be nothing in the circumstances, under which the United States acquired their title to these lands, which can have much influence upon the question. Whatever may have been the case formerly, their title is now universally acknowledged; subject, however, to the paramount right of the Aborigines, where their title has not already been surrendered. A brief allusion to these circumstances, will be sufficient for the purposes of the present inquiry. The early grants made by the English Government to the first colonists in North America, were unquestionably made under a profound ignorance of the geographical character and condition of the country. Most of them were extended in terms to the Pacific, or Great Western Ocean. It was, no doubt, the policy of that government, to make these grants large and extensive in terms, with the view of anticipating the progress of other European powers, and thereby giving greater strength, and a wider extent to their own claim of sovereignty, over this part of the new world. The consequence of this utter ignorance of the state of the country, united to a disposition to make liberal grants, soon appeared, in many conflicting claims and contested boundaries. These, however, except in the immediate vicinity of actual settlements, were of little importance, because the lands in dispute were of little or no value. But during the war, which terminated in the conquest of Canada, in which the colonists bore an active part, and still more during the revolutionary war, in consequence of the numerouse military expeditions which were sent to the northern and western frontier, the fertility of soil, and other local advantages of the Western and North Western Territory, came to be better understood, and more duly appreciated. So triumphant were the arms of America, towards the close of that memorable struggle, and so lofty their pretensions, in consequence of the great interest which their cause had excited in Europe, and the consequent aid derived from numerous powerful, and zealous allies, that at the adoption of the treaty of peace, the American negociators were left almost at liberty to dictate their own terms, in regard to boundaries. The consequence was, by prescribing very extensive limits, that in many points, large tracts of territory were included within these limits, which were never claimed, and scarcely on any pretence, however extravagant, could be claimed by any of the separate states. These tracts, thus ceded by the treaty of peace, in full sovereignty and property, necessarily belonged to all the States jointly, in their aggregate capacity. After various delays and negociations, between Congress and the several States, all those States having claims under their antient charters, to tracts of land beyond the bounds of their actual settlement, with a spirit of conciliation and liberality, highly honourable to them, ceded these lands to the United States, in nearly every instance, without pecuniary consideration. To some of these cessions, conditions were annexed; but none which it is necessary to mention, in connexion with this subject. The object of all these cessions, seems to have been the same, and was well expressed by Virginia, in her formal act of cession. This provides, that these lands "shall be considered as a common fund, for the use and benefit of such of the United States as have become or shall become members of the confederation, or federal alliance of the said States, Virginia inclusive, according to their usual respective proportions in the general charge and expenditure, and shall be faithfully and *bona fide* disposed of for that purpose, and for no other use or purpose whatsoever." The inducement to these liberal cessions of territory, was to raise the credit, and strengthen the resources of the Union, and thus enable the General Government to provide the means of paying or securing the debts incurred by the war, more especially that portion of them, which was due for military services.

Subsequently, that vast tract of territory included under the name of Louisianna, and more recently the peninsula of Florida, were acquired by the United States, by purchase; and the consideration being paid out of the common treasury, these lands unquestionably became the common property of the Union. Your Committee, therefore, do cordially concur with the Legislature of Maryland, in the proposition, "that in whatever point of view the Public Lands are considered, whether as acquired by purchase, conquest, or cession, they are, emphatically, the common property of the Union. They ought to enure, therefore to the common use and benefit of all the States, in just proportions, and cannot be appropriated to the use and benefit of any particular State or states, to the exclusion of the others, without an infringement of the principles upon which the cessions from States were expressly made, and a violation of the spirit of our national compact, as well as the principles of justice and sound policy."

The Legislature of Maryland proceed to inquire how far Congress has acted in conformity with the dictates of impartial justice, in the appropriations of the Public Lands; and concluding that Congress has not so acted, thereupon found a very large claim to these lands, in favour of the sixteen old States, to the exclusion of the new States and Territories, which are denominated the *favoured* States. This claim may be thus stated. By the laws and regulations relating to the survey and sale of the Public Lands, hitherto acted on, and now in force, one thirty sixth part, being one section out of each township of six miles square, and divided into thirty six sections, is reserved to be appropriated to the use of Schools, within such township. Certain other appropriations, though of comparatively small amount, and not very distinctly stated, are alleged to have been made for Seminaries of Learning of a higher grade, assumed by the Legislature of Maryland, to be in the proportion of one fifth of the aggregate amount of the reservations for common Schools. It is further assumed, that the same system for the survey and sale of these lands, will be observed, in all future time, until every acre of them is sold; an event, of the certain and speedy accomplishment of which, the Legislature of Maryland seem to entertain no doubt. (1) Taking a computation and estimate upon this assumption, in reference to all the lands of the United States, not only those which have been surveyed but including all the unexplored surface of the North Western Territory, and the more extensive and unknown regions of Louisiana, stated to amount to between four and five hundred millions of acres, the inference is drawn, that the total of literary appropriations, in the new States and Territories, will be 14,567,569 2-3 acres. At $2 an acre, the amount in money, will be $29,153,139 1-3. Then, considering it as proved, that these appropriations to the new States and Territories, does furnish a valid claim, in justice to the *excluded States*, to an equal quantity of land, in proportion to their extent of territory, the Legislature of Maryland come to the conclusion, that 9,370,760 acres of land will be "necessary to do justice to the States which have not yet had any." Such is, the claim set forth by the State of Maryland, in behalf of herself and the old States.

Your Commitee, in the first place, cannot avoid remarking upon the extraordinary nature and amount of these estimates and deductions. The boundless and trackless regions of Louisiana, for instance, which are yet not only unexplored, but over the greater part of which, even the eye of an American citizen has never wandered, is taken to be a present valuable and available fund, (2) out of which, in their whole extent, reservations may be made; and therefore, that the old States have a right to claim a quantity of land proportionate to these reservations, to be set off to them, within the settled States and Territories. Judging of the general character of that unknown and unexplored country, from the few portions of it which have been seen, it may be taken to consist mainly of vast plains, without wood, scantily watered, and serving only for a part of each year, to furnish coarse pasturage to immense herds of wild animals, but would be of little value were it even nearer to places where some settlements have been made. If these lands can be taken into the amount, for the purpose of swelling the quantity upon which our proportion is to be calculated, all being taken as it is to be of equal value, we cannot perceive why it would not be equitable to satisfy our claim out of the same lands. But the grant of a few hundred, or even a few millions of acres, upon the upper brances of the Yellow Stone River, along the eastern slope of the Rocky Mountains, or even upon the vallies of the Columbia River, would hardly be regarded as a favour, by Maryland or Massachusetts, especially if they were under obligation to survey them for a century to come. It is also to be considered, that a great part of the lands stated to belong to the United States, more especially those beyond the Mississippi, are still held by the Indian tribes, in full property, from whom the Government must purchase, before they acquire any right to sell them.

It seems scarcely necessary to remark upon the extraordinary fallacy of fixing the price of two dollars an acre, upon those vast tracts of waste and unsettled territory. (3) It is true that this is, or rather heretofore has been the price affixed by Congress to the Public Lands; but it is to be considered, that the expenses of surveying, and those attending the costly machinery of the land office system, are wholly borne by government; that although two dollars is the gross price, yet with the credits and discounts for prompt payment, it amounts to about three quarters only of that sum, and more especially, and this circumstance wholly distinguishes the two cases, that the lands thus sold for two dollars, lie within settled States and Territories, and are in immediate and present demand, for the purposes of actual settlement. And it is this exaggerated estimate, which has led the Legislature of Maryland to the startling conclusion, that the grants or reservations in favour of the new States and territories, may be estimated to amount in value, to the enormous sum of nearly thirty millions of dollars. This sum, we believe, is more than all the monies ever received from the sales of the Public Lands, from the commencement of the grants, to the present time, a period of thirty five years of unexampled activity and enterprize; during which, settlements have been formed, and a population has grown upon these territories, with a degree of rapidity entirely without parallel in the history of the progress of society.

It is, however, truly observed by the Legislature of Maryland, "that the magnitude of the appropriations which equal justice requires, cannot be considered as a reasonable objection to them." But your Committee are of opinion, that the magnitude of a claim, urged as a demand of right, furnishes a good reason for bringing it to the test of strict inquiry, to ascertain whether it is in truth founded upon those principles of equal justice upon which it is asserted.

(1.) *The Massachusetts' Committee appear to have fallen into an error in supposing, that the Legislature of Maryland "entertain no doubt" of the "speedy sale" of* "every acre" *of the public lands. We have carefully examined the Maryland Report, and can find nothing either in the language or train of argument, which can authorize the imputation of an expectation so extravagant and absurd.*

(2.) *The Committee, we apprehend, are under an erroneous impression, when they state that the "boundless and trackess regions of Louisiana are taken by the Maryland Legislature to be a* present *valuable and available fund." We cannot, after a diligent examination of Mr.* Maxcr's *Report, discover any thing of the kind.*

We must confess also our surprise at the reasoning of the Committee in several subsequent paragraphs. It is founded on the erroneous supposition, that Maryland claims for herself and other states, an appropriation of public lands for the purposes of education, bearing some sort of proportion *(what proportion is not stated)* to the amount of public lands possessed by the U. States. *Now nothing can appear clearer to us than that the object of the Maryland Proposition, is to obtain of Congress for the States, which have received none, grants of school lands*, proportionate to those which have been made to others. *The words of the Resolutions containing that proposition, are,*

"Resolved by the General Assembly of Maryland, *That each of the United States has an equal right to participate in the benefit of the Public Lands, the common property of the Uuion.*

"Resolved, *That the states, in whose favor Congress have not made appropriations of land for the purposes of education, are entitled to such appropriations as will correspond, in a just proportion, with those heretofore made in favour of the other states.*"

Now is not the principle *of these Resolutions, perfectly equitable? If so, the claim, founded upon it, would be equally valid and the same in amount, if appropriations of land for the purposes of education, had heretofore been made in favor of* one state only, *instead of* all *the states and territories, formed out of the public lands, and has no connection with, or dependence upon the entire quantity of those lands. It says to Congress, "you have made grants of land for the promotion of education to some of the states; make similar grants, and in a just proportion to some of the others." This demand could have been made with equal* propriety, if Louisiana had never been purchased of France.

If indeed, it can be shewn, that the states, which have received grants, have paid a consideration for them, then the matter is somewhat modified—but surely the other states have a right to ask of Congress, similar appropriations on condition of paying a consideration of equal value. All that Maryland asks, is for appropriations "in just *proportion," and leaves it entirely with Congress to decide what that just proportion is.*

(3.) *Have not the Massachusetts' Committe again misapprehended the Maryland Legislature? It appears to us, that the calculation, which they consider exaggerated is not intended as an estimate of the* present, *but the* future *value of the school reservations, as is clearly indicated by the use of the future tense. And is it extravagant to suppose, that the school lands, when surrounded by a population half as dense as that of the Atlantic states for instance, will be worth* two dollars *per acre? We presume that many of those in Ohio are at this moment worth more than* twenty dollars per acre

It is assumed throughout the report under consideration, that these reservations of land for the use of Schools, are to be justly regarded as donations or grants, to the several States and Territories within which they are situated, that they are thus granted for the use and benefit of such States, and to be applied to *State*, and not to *National* purposes. Supposing this view of the subject correct, in regard to States already formed, and Territories actually peopled; upon what just ground can it be extended to the unnumbered States, existing only in anticipation, which may, at some future time, be formed out of these vacant Territories, in which a cabin has not yet been erected, and towards which the boldest of the frontier settlers have yet scarcely made an approach? A grant implies parties; there must be a party to receive, as well as a party to convey. Yet our claim can only be sustained, to the extent asserted, by proving our right to demand in present possession, an equivalent for these supposed donations to imaginary States.*

But can these reservations be justly considered as grants or donations to any State within which they lie? A system for the survey and sale of the Public Lands has been adopted, originating in the celebrated ordinance of 20th May, 1785, before the adoption of the present Constitution, and modified by sundry acts of Congress. According to this system, lands intended to be sold, are surveyed before they are offered for sale, being actually divided into townships six miles square, and these subdivided into thirty six sections, each one mile square, and containing 640 acres. One of these sections, in each township, is uniformly reserved and given in perpetuity for the support of Schools in the township. This plan being adopted and made known, before the township is offered for sale, it is manifest that every purchaser, whether he take the whole or part of a township, purchases his land with this privilege annexed, and pays a full consideration for the privilege, in the price given for the land, to which such privilege is thus previously annexed. The United States as proprietors of a township thus surveyed, offer it for sale on these terms; that if a purchaser, or company of purchasers, will pay for the thirty five sections, at the price fixed, they shall be entitled to a grant thereof in fee, and the United States will forever hold the thirty sixth section in trust, for the use and benefit of such purchasers and their assigns, for the support of Schools. When land is taken at this offer, the contract becomes complete, and the United States are bound to execute this trust with fidelity; and it would be a manifest breach of faith, to compel such purchaser, in any shape, to pay a further equivalent for the privilege thus stipulated and paid for. But it would obviously be compelling such purchaser, thus to pay again for this benefit, if in consequence of such reservations, other lands or other funds, should be appropriated to the use of all other citizens of the United States, from the benefit of which, such purchaser should be excluded. Your Committee consider these reservations, as one of the means resorted to by the government, to give value to their lands, and thus to encourage and promote the sale of them. Suppose the United States, upon opening a tract of land for sale, should stipulate to make certain roads to, and through them; would the price paid for such roads, be regarded as a gift or gratuity to the purchasers of the land,. who should take it upon the terms thus offered? Every privilege, benefit and advantage, which an owner of property annexes to it, prior to the sale, and which thus passes with the property, as one of its incidents and appurtenances, must be considered as a sale for valuable consideration, and not as a gift or gratuity.

This arrangement, by which a portion of the Public Lands sold, is reserved for Schools, your Committee consider to be, in a high degree, wise and judicious. Whilst it serves to encourage the sale of the lands, in the first instance, it remains as a growing fund, becoming valuable in proportion as the occasion for its application arises, by the increase of families within the township. Still it is a fund, paid for by the owners of such township, which the government cannot resume without injustice and breach of faith, and for which, it would be equally unjust to claim an equivalent from other funds. It may, perhaps, be asserted, that the annexation of this privilege to lands, does not enhance their value, and is not ordinarily taken into consideration by purchasers. Such an assertion, however, we think would be entirely unwarranted. It may be very true, that many individuals buy, without entering into any very exact compatation of the value of this privilege, in dollars and cents. But as a general and known incident annexed to all lands derived from the public, as a general encouragement to settlers, proceeding from places where the advantages of school education are known, enjoyed, and appreciated, its effect is produced in that general aggregate of the judgments of men, which constitutes the market price, and fixes an average estimated value to such property. It is probable, therefore, that by enhancing this market price, and raising the general estimate of Public Lands by the reservation of the school lot, a full equivalent is obtained, for every acre thus set apart, and reserved as a trust fund. (4)

The Legislature of Maryland, appear to have anticipated this objection, and endeavour to answer it, by stating "that this increase of value has not been an *exclusive* benefit to the Atlantic States, but a benefit common to all the States, eastern and western, whilst the latter still enjoy *exclusively* the advantage derived from the appropriations of lands for literary purposes." But why, we ask, should it have been the *exclusive* benefit to the Atlantic States? These States were not the exclusive owners of these lands; they were the common property of all the people of the United States. If, therefore, the proceeds of these lands, thus raised in value, go into the common treasury of the United States, and thus enure to the benefit of the whole people, precise and exact justice is done to all parties. It is not to be forgotten, that an individual does not cease to be a citizen of the United States, by becoming a purchaser of its lands. It is the common case of an aggregate corporation, entering into a contract of sale with one of its members. As an individual, he pays into the common treasury a full equivalent for the property purchased; as a member of such corporation, he enjoys his full proportion of it, according to his share in its capital. (5)

But whatever may be considered to be the relation subsisting between the United States and the purchasers of any township, resulting from the school reservations it seems quite manifest that such reservations cannot be regarded as a grant to any *State*, or to the *people* of any State. The State Governments have no control over them, and can make no disposition of them. (6) It appears to have been taken for granted,

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* *Vide note 2, which shews, that our claim would have been the same, if no donations had been made to any but* settled *states or but* one *state.*

(4.) *The above reasoning, at first appears satisfactory and conclusive, but upon deeper reflection and closer examination, it will be found, we apprehend, to be unsupported both in principle and by facts.*

The Massachusetts Committee themselves will not refuse to admit, that no consideration has been paid for the school lands, unless the purchasers of the adjacent lands have paid a higher price than they would have done, if no reservation of school lots had been made.

Let us consider for a moment the principle which regulates price. It will not be disputed, we presume, that the price of any thing offered for sale, without restriction depends upon the relation, which supply bears to demand. *Instrinsic value does not determine it. Thus air, necessary to existence, bears no price because the supply is unlimited. Diamonds, which contribute chiefly to the gratification of vanity and the love of ostentation, and but little to purposes of real utility, bear an enormous price because extremely rare. This principle might be illustrated by a thousand familiar instances. We daily see the price of Agricultural produce and other commodities, rising and falling, as the relation between supply and demand alters, without any regard to quality or intrinsic value. Now apply this principle to the public lands, the supply of which, with the privilege of school lots annexed, (for it is annexed by existing laws to all the public lands as they are surveyed) may be said to be unlimited, while the demand is limited—and is it not mainfest, that unless some local advantage not common to others be attached to them, they would hardly sell for an amount equal to the expense of survey and office fees, were there no price prescribed by law, below which they should not be sold?*

Facts we believe, will confirm the result at which we arrive by reasoning upon the general principles. Nearly all the public lands, which have been disposed of, have been sold at the minimum, *or lowest price allowed by law. Where more has been given, it may be accounted for by some local advantage, having no connexion whatever with the reservation of school lots. The inference then is fair, that the* minimum *price has been given*, because the law requires it, *not because the advantage of school lots has been annexed—and becomes* irresistible, *when taken in connexion with the fact, that military bounty lands, which the owners are at liberty to sell at what price they please, of the same or better quality, with the like advantage of school lots attached to them, have been sold and may now be bought for* twenty-five cents *per acre.*

The above facts, supported as they are, by conformity to the general principle, seem to us to offer not only negative but something like positive proof, that no higher price has been given for new lands, than would have been given for them, had no school lots been annexed: and of course that no consideration has been paid for those school lots: *and that they must be considered to be actually and truly,* Donations, *as they are called in several acts of Congress. Nor can we discover, either from Reports or preambles of acts, that they ever were intended by Congress for any other purpose than to adopt the language of the ordinance for the Government of the N. W. Territory, the promotion "of religion, morality and knowledge" as "being necessary to good government and the happiness of mankind."*

(5.) *But would a corporation act with justice and impartiality, if it should grant* advantageous bargains, *(if you will) to a* part *of the* members *to the* exclusion *of the* rest?

(6.) *The school lots in Ohio were granted by a compact with a convention of that state, for the* that the purchasers must necessarily be the settlers of the Public Lands. But it is obvious, that a citizen of Maryland or Massachusetts may as well be the purchaser of these townships; and as the reservation enures to the benefit of the purchasers, and their assigns, this benefit would be extended to such persons as effectually, as if they were citizens of the State or Territory, within which, such lands might lie.

Your Committee would suggest another consideration which presents itself to their minds, as one, of great weight, and which must reduce the claim in question, to a very small portion of its alleged amount, were it not in other respects well founded. If the school reservation can in any respect be considered as a grant or donation, it can only be so considered, to the extent to which lands have been *actually sold*, under the present system. Certainly, where a township has been sold, with the privilege annexed, Congress cannot with good faith, revoke it. But where the rights of purchasers have not intervened, Congress has an unquestionable right to alter this system for the survey and sale of public lands, to recall the standing proposals now by law, made to purchasers, without breach of faith, and to propose such other terms, as policy and expediency may dictate. (7) This, in some instances, Congress has done. In some of the early grants, that to the Ohio Company, and J. C. Symmes, a like reservation was made for religious objects. Subsequently, this reservation was discontinued; and no one ever thought of imputing to Congress a breach of faith in this particular, nor was any claim ever advanced, in consequence of this reservation in behalf of the old States. Indeed, it is perfectly obvious, that the present system of sale is governed by considerations of expediency, and is one which Congress may discontinue at any moment. Should this now be done, what would become of all that part of the claim of the old States, founded upon a computation of the 400,000,000 acres, not yet sold, surveyed, or explored? (8)

If then, this claim were well founded, it could only be practically asserted at the present time, to the extent of that proportion of lands, which have been reserved upon sales actually made. Because, should Congress discontinue the accustomed reservation, and order a sale of the whole thirty six sections in each township, the old States would enjoy their full proportion of this common property, in the proceeds of the sales, thus brought into the public treasury.

Considering these school reservations, beyond townships actually sold, as altogether contingent, depending upon the will and judgment of Congress, and to be affected by varying views of policy, your Committee cannot but regard, with extreme surprise, the language of the Legislature of Maryland, in which they speak of the whole 14,576,000 acres, being the aggregate of what these reservations *will be*, throughout the whole of the unsurveyed territory of the United States, as land which, " has already been *given* to the favoured States and Territories," and thereupon to found a demand for an immediate allowance of a proportionate amount in behalf of the *excluded States*. (9)

Your Committee, however, are far from entertaining a doubt of the purity and uprightness of the motives, in which this proposition originated. On the contrary, they firmly believe that the Legislature of Maryland, in the claim which they have advanced, and those of the other States which have given it their sanction, have been actuated by an honest, but very ardent desire to promote a highly interesting and laudable object, that of education; but through the zeal and earnestness with which this object has been pursued, they have been led to overlook the unsoundness of the principles upon which this extraordinary claim is asserted. But the allowance of this claim, looking as it avowedly does, for large donations to some of the states, to the exclusion of others, if not fully established, and clearly shewn to rest upon principles of strict right, would be a palpable violation of the dictates of impartial justice, so eloquently and powerfully urged by the Legislature of Maryland.

Your Committee ask leave to call the attention of the Legislature to one more topic arising out of the subject committed to them, which is, the ratio upon which it is proposed to distribute the lands among the old States, should they be granted by Congress, in pursuance of this claim. The Legislature of Maryland proposes that they should be distributed among these States in proportion to their respective superficial extent. (10.) This rule seems not only to be entirely arbitrary, and founded on no principle of equity, but repugnant to the general spirit and design of the cessions of the respective States, and a violation of the express condition upon cessions were made by Virginia, that these lands, namely, should enure to the benefit of all the States, " according to their usual respective proportions in the general charge and expenditure." This was the language used during the existence of the confederation, and was at that time entirely appropriate. It is not now strictly accurate to speak of these lands as the common property of the *States*; but conformably to the spirit and principles of the present Constitution, they are rather to be regarded as the property of the people of the United States, directly and fully represented in Congress. According to these principles, upon the present system, the proceeds of lands are brought into the treasury, and enure to the benefit of the citizens, in the exact proportion in which they contribute to the general charge; therefore, the

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benefit of the inhabitants *of every township in the state.* [*Vide act admitting Ohio into the Union, April* 30, 1802.] *That compact has been extended to all the new states, formed out of the public lands. Their Legislatures are in the constant habit of passing general laws for the regulation and management of the school lots:—and we apprehend that the state governments have every sort of control over them, except the power of selling them, or converting them to other uses, than the promotion of education in each township. These school Reservations seem to us to possess every attribute of donations, (modified and restricted in their use, we grant) to the new states,* or the people *of the new states.*

(7.) *That the Committee are not correct in this position, and that Congress have deprived themselves of the power of refusing the school grants hereafter, in new states already formed; we refer for proof to the compact alluded to in our last note. That compact first grants to Ohio, Lot number* 16 *of every township for the use of schools—2dly. Certain valuable salt springs—and 3dly. One Twentieth part of the nett proceeds of the lands being within the state, sold by Congress, for making public roads, leading to and through the state—on* condition *that Ohio shall not tax any tract of land sold within the State by the U. S., for five years after the sale. Let it be recollected that this compact has been extended to all the states formed out of the public lands. So long as the condition is fulfilled by those states, Congress cannot, without their consent, alter the system of school reservation. That condition, framed with a view to the system of public sales on credit, then existing, where titles were most frequently not given till five years, or nearly that length of time, after sale, though not to be considered in the light of an* equivalent price, *is nevertheless a sufficient consideration to bind Congress to the continuance of the system so long as the condition is complied with; but it would be extravagant in the extreme to say, that Congress on that account are not at liberty to make as favorable grants to the other states. If they now have not that liberty, they had it not after the above compact was made with Ohio, they had it not when the school grants were made to the states, subsequently formed and admitted into the Union. The grants to these states would be void, according to this doctrine—a doctrine, which would not be very acceptable to Illinois, Indiana, &c. if applied to themselves, however reconcileable to impartial justice it may appear, when used to exclude the old states from the benefit of appropriations for schools.*

If this exemption from taxation for five years, of lands sold by the United States, be considered injurious to the new states, whose population it has a tendency to increase at the expense of the old states, let it be abolished by mutal consent. It is not necessary to the present system of cash sales. The old states will not object to its repeal, if it forms an obstacle to the extension of school appropriations for their benefit; nor would they, it is believed, if the salt springs and the appropriation for roads, be not an equivalent for the amount of taxes, which the new states have been restricted from leveying on the very small portion of the public lands, hitherto sold within them, object to Congress giving an equivalent in some other form.

Congress, we believe, were never bound by any compact with John Cleves Symmes, or the Ohio Company, to continue to reserve Lots for religious purposes.

(8.) To shew that Maryland makes no claim to school lands, " founded upon a computation of the 400,000,000 acres not yet sold, surveyed or explored," the reader is referred to Note 2.

(9.) We know not how this, the most extraordinary of all the numerous mistakes, in regard to the Maryland Report, into which the Massachusetts' Committee have fallen, could have happened; but the fact is, that the words quoted as " the language of the Legislature of Maryland," which that Committee " cannot but regard with extreme surprise," are not the " language of the Legislature of Maryland," and are not to be found in the Maryland Report or Resolutions.

(10.) That the Committee are mistaken in supposing, that the Legislature of Maryland proposes, that the lands, claimed for the old states, should be distributed amongst them " in proportion to their superficial extent," is manifest from the words of the Maryland Resolution, which is as follows, to wit: " *Resolved, that the states, in whose favor Congress have not made appropriations of land, for the purpose of education, are entitled to such appropriations as will correspond, in a just proportion, with those heretofore made in favour of the other states.*"

It is moreover manifest from the phrascology of the above resolution, that the Legislature of Maryland did not take upon themselves to decide, but left it, as was proper, entirely to Congress to decide what is the just proportion, by which the distribution of the lands or their *proceeds* should be made, and to prescribe the conditions, if any should be deemed necessary, and the form according to which grants should be made. In short, the Legislature of Maryland simply assert the justice of the claim, but do not presume to point out the mode in which justice shall be done.

lands, if distributed, must equitably follow the same proportion.*

It is hardly to be presumed, however, that it is seriously in contemplation to grant the land itself to the sixteen States, respectively. Should eight or ten millions of acres be thus granted, with liberty to the several States to dispose of them, as they might think fit, it is very certain that so many sellers coming into the land-market at once, would not only depreciate the value of their own lands, but entirely derange the present system of land sales, by the United States, and divert that source of revenue from its present channel, for many years to come. To avoid this ruinous system, it would, probably, be proposed to pay in cash, a certain proportion of the proceeds of the sale of Public Lands. But in this case, it would be necessary to replace the same sum from other funds, so that in point of fact, it would be quite immaterial whether these sums were paid out of those proceeds specifically, or from any other public monies, being in either case, a general charge on the treasury. Whether land therefore, or money, be distributed, no other equitable rule of proportion can be followed, than that of contribution to the general charge, because in either case, the amount thus taken, must be replaced by such contribution. Nor does it appear of the slightest importance whether those who are entitled to receive, happen to be closely settled on a small surface, or thinly scattered over an extensive territory. Extent of surface, therefore, can furnish no safe or equitable rule of distribution. But it is, perhaps, easy to perceive the error, in which this proposed ratio of distribution arose, and to trace it to that general delusion, if the expression may be indulged, in which this extraordinary claim itself originated. The aggregate of these school reservations, being a portion of each township surveyed, for sale, must of course, be in exact proportion to the number of these townships. As a benefit promised to purchasers, this was the just proportion. Had such reservation been designed principally as a gift or gratuity, to inhabitants or settlers, independent of their interest in the lands, a different proportion would naturally have presented itself. (11.) This circumstance throws additional light upon the nature and character of these reservations, as incidental merely to the grants to which they were annexed, and of course, co-extensive with them.

Such are the views, which your Committee have felt it their duty to submit to the Legislature, relative to the most important question, arising out of this subject. The further claim, founded on the suggestion that donations of lands have been made to certain States, for the support of Seminaries of Learning of a higher grade, may perhaps stand on a footing somewhat different. Seven townships appear to have been granted for this purpose to several States and Territories, and others may have been granted, of the circumstances attending which, and the considerations upon which they were made, your Committee have not been able to obtain precise and satisfactory information. They are, however, so unimportant in point of amount, as not materially to affect the general question. If the reservations of the thirty sixth part of the Public Lands, for the support of Schools, are not of a character to sustain the present claim in behalf of the old states, the proposition of the State of Maryland must entirey fail. A general desire to promote the great object of school education, will not be sufficient to justify an affirmative decision on this proposition. It is a question of strict right, between parties having adverse interests, the decision of which may involve consequences deeply affecting the future peace and harmony of the Union. The form in which this claim is made, as well as the claim itself, appears calculated to awaken jealousy and discord. Some are denominated the *favoured*, and others the *excluded* States. The latter are represented to be powerful, having one hundred and sixty-nine Representatives in Congress; the former feeble, having only seventeen Representatives. The question is ultimately to be decided by these Representatives, having themselves an interest in the question. As a question between parties thus situated, it becomes an imperious duty to waive all considerations of interest, policy and expediency, and to decide only upon those unerring principles of justice, which can alone ensure harmony and safety.—The question, whether Congress has power, and whether under any circumstances, it would be adviseable to exercise it, in making appropria- for the encouragement and support of schools and other seminaries, for the common use and benefit of all the people of the Union, is one of an entirely different character, upon which your Committee feel confident, that the Legislature of Massachusetts will be ready to act with promptness and liberality, whenever that question is distinctly presented.

Your Committee would have felt more entire confidence in the result of their enquiries, had not opinions of an opposite character been expressed by those, for whose judgment they entertain the highest deference and respect. This circumstance has induced them to examine the subject with all the attention which other engagements would permit, and to assign reasons which have influenced them, at much greater length than would otherwise have been proper. But believing that the proposition of the Legislature of Maryland cannot be sustained upon just and satisfactory grounds, and that the adoption of it by this Legislature, would be attended with consequences, highly injurious to the harmony and best interests of the Union, they ask leave to recommend the adoption of the subjoined resolutions.

All which is respectfully submitted.

For the Commmittee,

January 21, 1822. LEMUEL SHAW.

RESOLVED, That the Public Lands of the United States, are justly considered to be the common property of the Union, and that no State can justly claim any exclusive appropriation of them.

RESOLVED, That the reservation of certain lots of land in townships offered for sale by the United States, for the support of schools in such townships, in pursuance of standing laws, cannot justly be considered as a donation to the States within which such lands are situated, and cannot, therefore, entitle any other State to demand any land or other donation by way of equivalent.

RESOLVED, That His Excellency the Governor, be requested to transmit copies of the foregoing report and resolutions to the Governors of the several States, with a request that they will communicate the same to the Legislatures thereof, respectively; also to each of the Senators and Representatives of this Commonwealth, in Congress.

N. B. Those who feel an interest in the important subject of the foregoing Report, and wish to compare the argument contained therein with those in the Maryland Report, may see the latter report at large in the American Farmer, vol. 3, page 81.

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* Vide Note 11.

(11.) It is apparent from the last note, that Maryland does not propose, as the Massachusetts Committee suppose, that the school lands, if granted to the states, which have received none heretofore, or the proceeds of them, should be distributed amongst them according to "extent of surface;" and we agree with that Committee, that "extent of surface, can," in those states "furnish no safe or equitable rule of distribution." The case, however, is different in the states formed out of the public lands. *Extent of surface in these furnishes the best guide for arriving at an equitable distribution, in reference to population, the subject of education.* Let it be borne in mind, that the school grants in these states are *reservations in perpetuity* of lots number 16, in the centre of each township. These lots can never be sold. Their value, as a fund for the promotion of education, depends upon the rent which they will bring. In unsettled townships, they will bring none. In townships, thinly settled, where land in fee simple can be purchased cheap, they will bring but little. But they will command a high rent in townships thickly settled, where of course the price of land in fee simple will be high and *rentable* land of course in demand. In short, *cæteris paribus*, the rent of these school lots will be *in proportion to population*—their value therefore, as a fund for the support of schools, will be *in proportion to population*, an *will increase with it*;—an advantage incident to the local situation of the new states, carved out of the public lands, which cannot be extended to the old states; for, when the lands appropriated to their benefit, shall once be sold, the fund becomes fixed and cannot increase.

The grants therefore to the new states, though in form they are proportioned to *territorial extent*, operate *beneficially* in a "just proportion," *according to population*, and of course as respects those states, in entire conformity with the spirit of the condition of the cessions, by Virginia and other states, to wit: that these lands should enure to the benefit of the states, "according to their usual respective proportion in the general charge and expenditure" which is in proportion to Representation in Congress, and of course in proportion to population.

Perhaps the best rule of distribution of the proceeds of the school lands amongst the states, which have had no grants, after Congress shall have determined the aggregate amount of land, to which they are equitably entitled, as between them and the other states, would be a *Ratio, compounded of actual population and territorial extent*, weight being given to territorial extent, on account of future population.

HORTICULTURE.

POMARIUM BRITANNICUM,

An Historical and Botanical account of Fruits, known in Great Britain, by Henry Philips.—Second Edition.

(Continued from page 170.)

DATE.—DACTYLUS.

A Species of the Palma, or Palm Tree.—Date Tree, Phænix Dactylifera. In Botany, of the Diæcia Triandria Class.

The palm-tree is a native of the eastern countries, and has been known to grow in the deserts of Arabia and Syria from the earliest ages.—Dates appear to have been the first food which the Israelites found in the wilderness of Shur.—"And they came to Elim, where twelve wells of water, and threescore and ten palm-trees, and they encamped there by the waters." (Exodus, chap. xv. verse 27.) The ancients esteemed dates next to the vine and olive.

The palm-trees are very lucrative to the Arabs and other inhabitants of the desert, where the fruit forms a principal part of their food, particularly in all that part of the Zaara which is near Mount Atlas, where they grow but little corn, and chiefly depend on this fruit for subsistence.—In this part of the world, forests of date-trees may be seen, some of which are several leagues in circumference. The Grecian and Roman authors have given full accounts of this fruit. It is related that Alexander's army having met with dates of such a delicious quality, many, who could not forbear eating too plentifully, died.—There is one kind of date described by the ancient authors, that would inebrate and overturn the brain.

The Babylonian, or Royal Dates, were most esteemed: these, in ancient times, were reserved for the kings of Persia, and are said to have grown only in one hortyard or park at Babylon, which was annexed to the Persian crown. The dates at Jericho, in Jewry, were also in high estimation with the ancients, who made both bread and wine of them. Pliny, who has written at great length upon this fruit, mentions forty-nine kinds of dates, varying according to the country where they grew; some of which were white, black, or brown, some were round, others in the shape of a finger, some very small, and others he describes as being as large as the pomegranate.—One species of the date, the Lotus, was much cultivated in Italy, and is by some supposed to be the fruit by which the companions of Ulyses were enchanted, and forgot their native country.

Italy, and the coast of Spain, have been renowned for palm-trees more than two thousand years: "but the dates," says Pliny, "never come to maturity or ripeness, nor were they ever known to grow without being planted:" this caused him to state that they were foreign trees.

The Arabs eat dates without seasoning, for they have a very agreeable taste when they are fresh, and afford wholesome nourishment.—These people dry and harden them in the sun, to reduce them to a kind of meal, which they preserve for food when they undertake long journeys across the deserts; and they will subsist a considerable time on this simple nourishment: pieces of the date-bread diluted in water afford a refreshing beverage. The Arabs likewise strip the bark and fibrous parts from the young date-trees, and eat the substance that is in the centre. It is very nourishing, and has a sweet taste, and they call it the marrow of the date-tree: they also eat the leaves when they are young and tender, mixed with lemon-juice, as a salad. The male flowers are also eaten, when tender, in the same manner. The fruit before it is ripe is somewhat astringent, but when thoroughly mature is of the nature of the fig.—A white liquor, known by the name of date-milk, is drawn from the palm-tree. To obtain it, all the branches are cut from the summit of one of these trees; and after several incisions have been made in it, they are covered with leaves, in order that the heat of the sun may not dry it; the sap then drops into a vessel placed to receive the liquor. The milk of the date-tree has an agreeable sweet taste when new: it is very refreshing, and is given even to sick people. Thus has Providence reared a blessing in the sandy desert for the wanderer.

Even the stones of dates, though very hard, are not thrown away; they are bruised and laid in water to soften, when they become good food for sheep and camels.

The Egyptians make an agreeable conserve of the fresh dates and sugar. The Arabs weave mats and other things of the same kind from the old leaves; and from the filaments which arise from the stumps of the branches, they fabricate both ropes and sails.

Among the trees of Egypt, there is none more common than the date-tree, both on the sands as well as on the cultivated districts. It requires no attention, and is very profitable, the fruit being in great demand, particularly that in the neighbourhood of Rosetta, which is delicious. The branches are cut off with the dates upon them before they are thoroughly ripe, and thrust into baskets made for the purpose, which have no other aperture than a hole, through which the branches project. The dates thus packed up, ripen in succession, and boats are laden with them, and sent to Cairo. Could they not be brought to England in this state?

The timber is so durable, that it is thought incorruptible by the natives. It is used for making beams and implements of husbandry, as also for javelins, and the trees often grow to a hundred feet in height. There are but few trees which are used for so many valuable purposes, and I know of none where the sexual distinctions are so evident. It is the female tree which produces the fruit, and on which account it is cultivated in greater numbers; but in order to obtain the fruit, the orientalists, who live upon it, plant male trees also; and it is no uncommon practice for their enemies, in time of war, to cut down the male trees, which prevents the others from producing dates, and causes famine. The number of female trees cultivated in Asia, is much greater than that of the males, the former being more profitable.

The sexual organs of the date-tree grow upon different stalks; and when they are in flower, the Arabs cut the male branches to impregnate the female blossoms: for this purpose, they make incisions in the trunk of each branch which they wish to produce fruit, and place in it a stalk of male flowers: without this precaution, the date-tree would produce only abortive fruit. In some parts the male branches are only shaken over the female blossoms. This practice was known to the ancients, and is accurately described by Pliny, who says, "if the male tree be cut down, *his wives* will afterwards become barren, and bare no more dates, as if they were widows. So evident is the copulation of the sexes in the date-trees," says he, "that men have devised to make the females fruitful, by casting upon them the blooms and down that the male tree bears, and sometimes by strewing the powder which he yields upon them."

Linnæus, in his Dissertation on the Sexes of Plants, speaking of the date-tree, says, "A female date-bearing palm, flowered many years at Berlin, without producing any seeds; but the Berlin people, taking care to have some of the blossoms of the male tree, which was then flowering at Leipsic, sent them by the post; they obtained fruit by these means; and some dates, the offspring of this impregnation, being planted in my garden, sprung up, and to this day continue to grow vigorously."

Père Labat, in his Account of America, mentions a tree which grew near a convent in Martinique, that produced a great quantity of fruit, which came to maturity enough for eating: but as there was no other tree of the kind in the island, it was desirable to propagate it, but none of the seeds would grow. He conjectures that the tree might probably be so far impregnated by some neighbouring palm tree, as to render it capable of bearing fruit, but not sufficient to make the seeds prolific.

M. Geoffrey cites a story from Jovicus Pontanus, who relates, "that, in his time, there were two palm-trees, the one a male, the other a female, in the wood Otranto, fifteen leagues apart; that this latter was several years without bearing any fruit; till at length, rising above the other trees of the forest, so as it might see," says the poet, "the male palm-tree at Brindisi, it then began to bear fruit in abundance." M. Geoffrey makes no doubt but that the tree then only began to bear fruit, because it was in a condition to catch on it's branches the farina of the male brought thither by the wind.

It may appear to many persons almost incredible, that the pollen of the male flower should be conveyed to so great a distance; but that it should be attracted by a tree of it's own species, will not create so much our wonder, when, with the least reflection, we must be satisfied that the glutinous moisture on the stigmata of flowers, has an attraction for the pollen of the anthera of it's kind only; else, when a variety of flowers were blossoming at the same time, we should have the rose impregnating the lily, and the wheat giving it's generating powder to the poppy. All animals and insects, when left to nature, couple with their kinds. Vegetables do the same, although it is now clearly ascertained that it is possible to make the stigmata of one blossom receive the pollen of another, if it is prevented from taking that of it's own species; and thus we have within these last few years so great a variety of new flowers and fruits.

The date tree grows very rapidly, and will produce fruit in some countries in the third year, while in others it is from four to six years before it begins to bear: when arrived at maturity, it makes no change, but remains in the same state for three generations, according to the account of the Arabs. Like most other fruits, the date requires cultivation to have it good, as the fruit which is produced from trees which have been raised from seed is poor and ill-tasted, while those trees which are reared from the shoots, give dates of good quality.

The flowers of both sexes come out in very long bunches from the trunk between the leaves, and are covered with a spatha which opens and withers: those of the male have six short stamimina, with narrow four-cornered anthers filled with farina. The female flowers have no stamina.

Dates are imported into this country in a dried state, similar to dried figs: when in good condition, they are much esteemed, and fetch a high price, At the present time, they are sold for five shillings the pound, although inferior kinds may be bought much cheaper for medicinal purposes, for which they are principally used in England, being considered hard of digestion, and often causing the head-ache to those who eat them in quantities, and they create scorbutic complaints as well as the loss of teeth. In medicine, the qualities of dates are to soften the asperities of the throat, to assuage all immoderate fluxes of the stomach, and to ease disorders of the reins, &c. The oil and phlegm render them moistening and good to assuage coughs. They stop vomitings and fluxes, and are good for the piles when taken in red wine. *(Barham.)*

They are principally brought from Africa, Egypt, and Syria, but the finest come from Tunis.

Near Elete, in Spain, there is a wood consisting of two hundred thousand palm-trees, bearing dates. These trees furnish a curious traffic: the branches of them are bound up in mats to bleach the leaves, which in time become white; they are then cut off, and sent in ship-loads to Genoa and other parts of Italy, for the grand procession of Palm Sunday. There is a great trade in them with Madrid also, where every house has it's blessed palm-branch. The dates seldom ripen so thoroughly as to keep well.

Hughes, in his Natural History of Barbadoes, speaking of the date-tree, says, "The straightest and youngest branches, which grow near the summit of the tree, are much used here by the Jews, upon their feast of Tabernacles: these they usually gild, and adorn with various flowers, and then carry them in procession to their synagogue." He adds, "whether this is the same kind of palm that was used by the Israelites, we know not, or whether it is not here succedaneously used as bearing the nearest resemblance to it."

(To be continued.)

* * *

ON THE FLY IN WHEAT.

We submitted the following letter and the specimens which it contained, to the examination of Professor Green of Nassau Hall; who has obligingly noticed the subject, and promises some further remarks.

Edit. Am. Far.

TO THE EDITOR OF THE AMERICAN FARMER.

Culpepper County, Woodville,
(Va.) May 28, 1822.

Dear Sir,

Enclosed you will receive a few blades of wheat, and by examination you will find that a deposit of eggs has been made by the Fly in a mode not heretofore mentioned by any one.

The germs are now in the maggot state, and occupy an apparently comfortable position in the substance of the blade, and most generally the top blade. You will find them between the surfaces, which are membranous, a fact which I never before observed. As they progress, feeding on the green pulp, they enlarge the cavity or bag, and the leaf then exhibits the appearance called "*fired*," which must proceed either from an absorption, or change of the colour of the pulp. Whether the season, or some adventitious circumstance, has produced this aberration; or, whether its consequences will be more or less injurious to the farmer, must be left for time to disclose. The injury is most prevalent in rank wheat.

Your's respectfully,
PHILIP THORNTON.

Princeton, August 16*th*, 1822.

Dear Sir,

It would afford me much satisfaction to be able to communicate any useful hint on the interesting subject of your letter, and its enclosures: I fear, however, the amateurs of Natural History will be able to assist but little in the extermination of so formidable an enemy to our wheat crops, as the Hessian Fly. If the devastations made by this insect are ever arrested, it will in all probability be done by the practical farmer. The fact which your correspondent, Mr. Thornton, communicates respecting the *situation* in which the fly has deposited its eggs, near *the top* of the *blades* of wheat, is to me entirely new, and upon enquiring among some of our most intelligent farmers, I cannot find that they ever witnessed a similar phenomenon. The fly I have always been led to believe was particularly careful, not only in selecting the interior of the plant to deposit its eggs, but also in placing them near the bottom, or root, so that when the *larva* or maggot was excluded from the egg, it would find itself surrounded by the soft and nutritious part of the plant, on which it supports itself during the winter. From this circumstance taken in connexion with the fact, that the *instincts* of animals with regard to their offspring, vary but little, I am induced to believe that the blades of wheat you sent for my examination have been injured by some other insect than the common Hessian Fly; and the imperfect state of the specimens, and my limited knowledge on this subject, would not permit me to determine the precise genus of insects, to which these animals belong.

There is a curious fact connected with this subject not generally known to farmers, and which has led to some little mistakes. There is a fly called the *ceraphron* by naturalists, which is often seen in swarms among the wheat about the same time the depredations are made by the Hessian Fly. This insect is not quite so large as the other, and may be distinguished from it by the wings, which are four in number; the common fly being furnished with two only. The ceraphron so far from being injurious to the crops, is a great protection to them; for it deposits its egg within the body of the larva or germ of the Hessian Fy, which it eventually kills for its own support; so that whole crops of wheat which might otherwise have been destroyed, are thus saved. After the ceraphron has deposited its eggs, their wings are thrown off, so that it appears like the common ant; and this curious fact has led many to believe, that the Hessian Fly is nothing more than a species of that insect.

Your's respectfully,
J. S. Skinner, Esq. JACOB GREEN.

* * *

FOR THE AMERICAN FARMER.

DISEASES OF HORSES, THE "BIG HEAD."

"Information is wanted with regard to a disease of horses known in this part of the country by the term "big head." The disease commences with swellings, apparently of the bones of the face, on each cheek a few inches below the eyes, attended with a slight discharge of pale bluish mucus from the nostrils.

"Is this the disease described under the name of Glanders? Is it contagious? Are mules liable to be affected by it? Is it curable, and by what means? Should any person offer the information above solicited it will be thankfully received by F."

Milledgeville, Geo.

Editorial Correspondence.

Extract of a letter to the Editor of the American Farmer, dated York Town, Va. August 19*th*, 1822.

CORN, WHEAT AND COTTON CROPS.—CORN MILLS, &c.

A severe drought now oppresses us—Up to the third week of July, our corn crops were more promising than at the same period of time, and earlier by twenty days than in any former crop of my recollection; but our fine prospects are at an end; the forward corn crop upon our *best lands*, will it is believed, by the most observing and intelligent farmer, reach not more than half a crop—and the corn planted late, and on thin cold land, or on light spare soil, can never recover; rain now, cannot aid the forward corn; it is too much advanced; nor can it assist the latter corn crops, because there are no *shoots* to fill, and the stalk itself is so dry and parched, that the circulation of the sap or fluid, is impeded—We are now busily engaged in gathering fodder, or corn blades, earlier by three weeks than has been known in this section of the State, for years; never within my recollection. Such are our prospects for a crop of Indian corn.

The wheat crop, lately, and now getting ready for market, is far short of the general expectation, and the individual hopes of the farmer. It is the practice of lower Virginia, to stack their small grain around perpendicular poles, in various parts of the field, most contiguous to the body of the grain—Stacks, made as usual with us, and by our best stackers, have this year, yielded in wheat but very little more than half the supposed contents. We have much straw; little grain, and the majority of farmers, whose average crop would reach four hundred bushels, and on which they calculated with certainty, will not this season, have more than two hundred bushels!

Cotton crop promises well. In this section of Virginia, our attention to cotton is confined to a sufficiency for domestic consumption—we never attempt a crop for exportation, for two reasons; we have not any cotton machines for cleaning the wool from the seed; and our extensive fields of Maize or Indian corn, and a full crop of wheat also, preclude the possibility of attending to a cotton crop, sufficiently extensive to make it a chief object—not that our climate or soil are adverse to the growth of cotton; but that our lands are equally productive in vegetables, nutritious to man and beast.

Is there to be had in Baltimore, a Corn Machine for grinding Indian corn into meal and homony by horse power?—is it approved, or has it been in use with you? are there such machines of different sizes? and what are their prices?*

Very respectfully,
THOMAS GRIFFIN.

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* Information on this subject will be thankfully received—especially from Farmers, who can speak from their own observation—and inventors of such Mills would find it to their advantage to furnish us with descriptions and drawings.

Edit. American Farmer.

WEEPING WILLOW.

Extract of a letter from a correspondent, dated Wilmington, N. C. 24*th July*, 1822.

I observe this beautiful Tree has been attacked by a writer in the American Farmer. From a remark I met with many years ago, that "in Priestley's opinion, the Willow was the greatest absorbent and corrector of bad air," I have planted them all round that part of my rice field which is nearest my dwelling and negro settlements. My people are very healthy, and although I move from hence to Smithville, ten miles down the River, six weeks or two months later than my South Carolina friends do from their Rice plantations, and later than any one in the neighbourhood of Wilmington, who has a summer residence—and although I visit it almost weekly through the fall, I experience no inconvenience. In my 66th year, I do not recollect having kept my bed a whole day in my life.

B. S.

Extract to the Editor of the American Farmer, dated King and Queen county, Virginia, 14*th August.*

"Our crops in this neighbourhood are suffering to the most alarming degree from the drought. The wheat crop is very deficient both in quantity and quality, and the corn which a few weeks ago was unusually promising, is now withering rapidly, beyond the power, I believe, of being retrieved by the most friendly seasons which could be desired.

Another extract, from Montgomery county, Md. states:—"That the drought still continued unusually severe in that neighbourhood, and that every kind of vegetation was destroyed—that the water for drinking and culinary purposes, in many instances, was not to be had within two miles of their dwellings; and that their stock also suffered very much from this great inconvenience."

Extract from a correspondent at Raleigh, N. C., August 8th.

"Our corn crops are uncommonly promising, but the great quantity of cotton under cultivation will make provisions scarce and dear."

COARSE SALT.

We yesterday received from Col. Wheeler, of Salina, as a sample, a small box of Salt, made at his works at Salina by the process of slow evaporation, by means of heated tubes passing through vats of salt water. This, we are told is altogether a new invention in the history of making salt, and for which Col. W. has, or is about to procure a patent from the United States. The process is a simple one, and may be described as follows:—There are two cisterns, or vats, made of plank, the upper cistern 50 feet long by 20 feet wide, the under one 50 by 25. The salt water is pumped into the upper cistern, and there brought to a salting state, so as to crystalize all the sulphate or carbonate of lime, and settle the same. The Water is then drawn into the lower cistern, where it is heated by means of fire operating on the tubes, which are of cast iron, to about 100 deg. Far. till it forms chrystals, some larger, others smaller, but all of a cubical form. One small fire warms both cisterns, by operating on the tubes. The water in the upper cistern is sometimes as hot as 150 deg. Far.

We are unable to say with what facility salt may be manufactured on this plan; but we are informed it can be made with much less expense than by the usual mode. The sample sent us is very superior, and resembling, in some respects, the St. Ubes salt.—*Onondaga N. Y. Register.*

THE SEASON.

We hear of one farmer in New York raising 3000 bushels of wheat this season, his acres averaging forty bushels each; and we have been told of other instances of unusual ingathering of early harvests. Throughout *New England* the fields are loaded with excellent Indian corn; uncommonly fine crops of rye, barley, and oats, have been well housed. Potatoes, and all the other vegetable tribes, promise abundance in size and superiority in quality; and the orchards in almost every direction are literally breaking down with the loads of rich fruit with which they are burdened.—*Boston Gaz.*

THE CROPS.

We have the pleasure to state, says the Virginia Roanoke Sentinel of the 17th inst. that the crops in this section of the country, are superior to what they have been for many years: every person we meet with says, he has the largest and finest Tobacco he ever saw. Corn is already engaged at one dollar per barrel, and it is the general opinion it may be bought at any time before it is cribbed at $1 25. We have understood that one or two neighbourhoods in this county, have suffered by the drought; but even those neighbourhoods will make amply sufficient for the support of their families. We have heard that the counties of Franklin, Patrick and Henry, have been as much favoured as this. We consider the crop safe, saving hail storms, gusts, freshets, &c.

From the N. Y. Statesman.

MAMMOTH VEGETABLES.

Mr. Editor, I saw a match for your green gages the other day, in a bunch of ONIONS, and they not produced in Wethersfield, or any other part of New England. This bunch or rope contained 64 onions, red and white alternately, and weighed 23 lbs. I bought several ordinary bunches of 48 large and small, which weighed about 7 lbs. each, twice the standard of Connecticut onions, at eight cents per bunch. They are raised on Long Island, and are of a Spanish seed or growth not heretofore seen in the market—and exhibit, I think, an improvement on that valuable esculent, equal to Cobbett's amelioration of the ruta baga. HORTI.

FROM THE BOSTON GAZETTE.

MANURE FROM SWINE—HOW TO INCREASE THE QUANTITY.

The dung of swine is very rich and fat manure, and so cold as to ferment very slowly. It is so rich and oily as to be double in value to neats dung. It will render the most dry and hungry soils exceedingly fruitful in a wettish season, as I have found by experience. It resists the ill effects of drought and does most service in a hot country. By its steady and gradual supply of a rich nourishment it is particularly adapted for the growing of hops, pumpkins, running beans, and every plant which has long vines. Nothing can equal it for the growing of potatoes; it has produced me more than a peck in a hill, on the poorest hungry sands; or rather, I might say, straw only a little impregnated with the dung of hogs has done it. This is so strong a manure, that it answers well when mixed with a large proportion of earth, weeds, straw or other bibulous substances. It is almost incredible how great a quantity of good manure may be obtained, by supplying a hog stye with rubbish to mix with the dung. I have heard of forty loads of manure being made in the year by means of one hog stye, and I have no doubt of its being practicable.

HORSE SHOEING.

Putting shoes on horses while the shoe is hot, is denounced in a late English paper as a very bad practice, and is the occasion of a great deal of lameness, by rendering the feet tender. The shoes should be entirely cool.

AMERICAN ISINGLASS.

A manufactory of this useful article has been established at Cape Ann by Mr. Wm. Hall, late of this city. The material for manufacture is obtained from fish taken from our coast. The specimens of isinglass manufactured at Cape Ann have been used by the brewers and confectioners in our city, who consider it fully equal if not superior to the imported.—*Pat.*

THE FARMER.

BALTIMORE, FRIDAY, AUGUST 30, 1822.

FINE FRUIT.

☞ The Editor of the American Farmer thankfully acknowledges the receipt of a basket of fine Fruit, from his friend and correspondent, John Willis, Esq. of Oxford, Caroline county, Md.—It being much superior to the fruit generally brought to this market, particularly the Pears, of which there were several varieties, he presented the same to Mr. Reubens Peale, the worthy and enterprizing proprietor of the Baltimore Museum, who exhibited it last week. We selected the place, where we supposed those who felt an interest in such matters would have a good opportunity to view it, and we understand a large concourse of people, who attended this place of fashionable resort, expressed high and general satisfaction.

MARYLAND TOBACCO.

Mr. Fiddemon Rolle, of St. Michales', Talbot county, sold his crop of Tobacco last week for 6 and $8. *Mr. Rolle* is a young planter, this being the first crop raised under his superintendance, and was of excellent quality. We believe this is the highest price obtained this season for Eastern Shore Tobacco, and is a just reward for good and judicious management.

PRICES CURRENT.—CORRECTED WEEKLY.

White Wheat, $1 20 a 1 25—very first quality, white Wheat, well cleaned, would probably bring $1 30—Red, do. $1 15 a 1 20—Corn, 68 a 70—Rye, 50 a 55 cts.—Oats, 35 a 40 cts.—Flour from the wagons, $6 37 a 6 50—Wharf, do. $6 25, 90 days—Shad, from $6 50 to 8 50—Herrings, $3 25 to 3 75—Beef, Northern mess per bbl. $10 to 10 25—Baltimore, prime do. $9 to $9 75—Hams, 10 to 12 cents—middlings, 6 to 8 cents—Cotton, West India, per lb. according to quality, 15 to 25 cents—New Orleans prime, 16 to 18 cents—Georgia, upland, do. 14 to 16 cents—Cheese, N. England, 12 to 15 cents, scarce—Coal, Virginia, per bushel, 25 to 30 cts.—English do., 40 cts.—Flax per lb. 10 to 10½ cents—Hops, fresh, per lb. 10 to 12 cents—Hogs' lard, per lb. 9 to 10 cents—Hides, E. Shore, per lb. 8 to 10 cents—Leather, soal, per lb. 24 to 25 cts.—Upper do., whole hide, $3 to $4 25—Salt, St. Ubes, per bushel, 50 cts.—Cadiz, do. 42 cts.—Liverpool, blown, 40 cts.—Ground do. 50—Turks' Island, 60—Wool, Merino, full blood, per lb. 35 to 40 cts.—Do. mixed, 28 to 30 cts.—Common country do., 20 to 30 cts.

Virginia Tobacco—5 hhds. Richmond, sold the last week, at $7 75.

REAL ESTATE FOR SALE.

I wish to sell two valuable tracts of land, lying in York county. One containing 800 acres, bordering on York river; this land is well suited to the culture of all grain crops and tobacco. On the shores the river continually throws up large quantities of Kelp, which has been found an excellent manure. There is within a hundred yards of the buildings, an excellent summer fishery, and oysters are taken in abundance throughout the winter; most buildings necessary to a farm, are erected on the land; a large quantity of marl is found on this farm; a large peach and apple orchard now bearing fruit. This farm may be conveniently divided (if required) into two neat farms of 400 acres each; with a portion of meadow, and a sufficiency of wood land to each. The soil on the river is a shelly loam.

The other farm I will sell, contains 450 acres. This land adjoins, in part, the town of York, and extends to York river; to this tract belongs a valuable shad and herring fishery; a variety of fish are taken thro' the spring, summer and autumn months; and oysters through the winter: This farm is level, and well watered; a meadow of thirty acres is attached; houses for negroes, barns, and corn houses are erected; it has also a good apple orchard: On this tract two extensive pits of shell marl are found, which are believed to be sufficient to manure the whole tract.

These lands will be offered for sale at public auction, on the 3d Monday of September next, being York court day, when the terms will be made known, and accommodating to purchasers.

THOMAS GRIFFIN.

Yorktown, Va. August 9.

PUBLISHED BY J. S. SKINNER.
PRINTED BY JOSEPH ROBINSON.

AGRICULTURE.

We are indebted to Mr. Thomas Wright, of England, for a copy of "the Graziers' ready reckoner," and we have his assurance, that the most confident reliance may be placed in its accuracy; he told us that he would not fear to purchase or sell extensively by this guide, which has passed through three English editions, and has in that country gone into very general use. The author of the tables, gives the required weight of animals in stones, and we have converted these for the use of our subscribers, into pounds. —*Editor American Farmer.*

The Graziers' ready reckoner, or, a useful guide for buying and selling cattle, being a complete set of TABLES, distinctly pointing out the Weight of Black-Cattle, sheep, or swine, from forty two, to eighteen hundred and twenty, by measurement; together with directions, shewing the particular parts where the Cattle are to be measured. By George Renton, *Berwickshire Farmer. The third edition. Berwick: price two shillings and sixpence, sterling.*

PREFACE.

Having been often solicited to publish the following Tables of this Ready Reckoner, I am now prevailed on to do so. I by no means take the praise of them as the inventor; but have undergone a laborious task in making out the calculations, which may be of use to the public.—For frequently the Buyer and Seller are at a loss even in concluding a bargain, by not being judges of the weight of the article they are treating about.

I have begun with the Calculations at three stones,* which may be as low as is necessary for those who have a swine or calf to sell: and who by no means have had such practical experience as to be judges by the eye. It may likewise be of service to those who have a beast above the common weight of cattle; they may obtain a knowledge of his value, almost to a nicety, by taking the following dimension, and considering the value per stone, sinking offals.

Take a string, put it round the beast, standing square, just behind the shoulder blade, measure on a foot rule the feet and inches he is in circumference, this is called the girth; then with the string measure from that bone the tail which plumbs the line with the hind part of the buttock, direct the line along the back to the fore part of the shoulder blade, take the dimensions on the foot rule as before, which is length, opposite these figures stand the pounds.

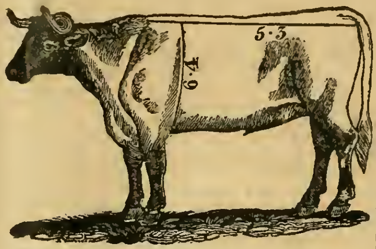
The girth and length of Black Cattle, Sheep, Calves or Swine being exactly taken, according to the directions given above, and wrought by decimals; would occasion a multiplicity of figures; which would be very troublesome in comparison of the following Tables, which will answer exactly to the fore quarters of any of the forementioned cattle, sinking the offal.

To bring these useful Tables into as small a compass as possible, I have not taken notice of the half inches, which confines them to the one-fourth of the figures. But to bring them to that point, when a beast measures half an inch, either in girth or length; it is only taking the difference of the leading figures. For instance, a beast measures in girth 6 feet 2½ inches, length 5 feet 4 inches, the weight of

Feet.	Inches.	
6	3	 697
6	2	 678
Difference		19

Take the half of 19 which is 95 added to 678 and it will make 687.5.

To render the following small treatise as generally useful as I can; and to prevent the possibility of making any mistakes in taking the dimensions of the Cattle in improper Places; I have engaged an ingenious engraver to represent the figure of an Ox, pointing out the particular places where the dimensions must be taken, in order to ascertain their weight, and I flatter myself it will be a very useful Addition.



706 lbs.

To a generous Public I now commit it, and hope, that, however it may succeed, the goodness of my intention will be a sufficient Justification of my conduct.

GEO. RENTON.

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* Of fourteen pounds each.

Girth. F. I.	length F. I.	Weight. pounds.	Girth. F. I.	length F. I.	Weight. pounds.
2 6	2 0	42	2 10	2 7	69
	2 1	43		2 8	71
	2 2	45		2 9	73
	2 3	46		2 10	76
	2 4	48		2 11	77
	2 5	50			
	2 6	52	2 11	2 0	56
2 7	2 0	45		2 1	59
	2 1	46		2 2	62
	2 2	48		2 3	63
	2 3	50		2 4	66
	2 4	52		2 5	69
	2 5	53		2 6	70
	2 6	56		2 7	73
	2 7	57		2 8	76
				2 9	78
2 8	2 0	46		2 10	80
	2 1	49		2 11	83
	2 2	50			
	2 3	53	3 0	2 0	60
	2 4	55		2 1	62
	2 5	57		2 2	64
	2 6	59		2 3	67
	2 7	60		2 4	70
	2 8	63		2 5	73
				2 6	76
2 9	2 0	50		2 7	77
	2 1	52		2 8	80
	2 2	55		2 9	83
	2 3	56		2 10	85
	2 4	59		2 11	87
	2 5	60			
	2 6	63	3 1	2 0	63
	2 7	64		2 1	66
	2 8	67		2 2	69
	2 9	69		2 3	71
				2 4	74
2 10	2 0	53		2 5	77
	2 1	55		2 6	80
	2 2	57		2 7	81
	2 3	60		2 8	84
	2 4	62		2 9	87
	2 5	64		2 10	90
	2 6	67		2 11	92

Girth. F. I.	length F. I.	Weight. pounds.	Girth. F. I.	length F. I.	Weight. pounds.
3 1	3 0	95	3 7	2 10	122
				2 11	125
3 2	2 0	66		3 0	129
	2 1	69		3 1	132
	2 2	71		3 2	136
	2 3	74		3 3	140
	2 4	77		3 4	143
	2 5	80			
	2 6	83	3 8	2 3	101
	2 7	85		2 4	104
	2 8	88		2 5	108
	2 9	91		2 6	112
	2 10	94		2 7	116
	2 11	97		2 8	119
	3 0	99		2 9	123
				2 10	126
3 3	2 0	70		2 11	130
	2 1	73		3 0	134
	2 2	76		3 1	139
	2 3	80		3 2	141
	2 4	83		3 3	146
	2 5	85		3 4	150
	2 6	88		3 5	153
	2 7	91		3 6	157
	2 8	94			
	2 9	97	3 9	2 4	109
	2 10	99		2 5	113
	2 11	102		2 6	118
	3 0	106		2 7	122
				2 8	125
3 4	2 3	83		2 9	129
	2 4	87		2 10	133
	2 5	90		2 11	137
	2 6	92		3 0	141
	2 7	95		3 1	146
	2 8	98		3 2	148
	2 9	102		3 3	153
	2 10	105		3 4	157
	2 11	108		3 5	161
	3 0	111		3 6	165
3 5	2 3	88	3 10	2 4	113
	2 4	91		2 5	118
	2 5	94		2 6	123
	2 6	98		2 7	126
	2 7	101		2 8	130
	2 8	104		2 9	134
	2 9	108		2 10	139
	2 10	111		2 11	143
	2 11	113		3 0	147
	3 0	118		3 1	151
	3 1	120		3 2	155
	3 2	123		3 3	160
	3 3	126		3 4	164
	3 4	132		3 5	168
				3 6	172
3 6	2 3	92			
	2 4	95	3 11	2 6	129
	2 5	98		2 7	133
	2 6	102		2 8	137
	2 7	105		2 9	141
	2 8	109		2 10	146
	2 9	112		2 11	150
	2 10	116		3 0	154
	2 11	119		3 1	158
	3 0	123		3 2	162
	3 1	126		3 3	167
	3 2	129		3 4	171
	3 3	133		3 5	175
	3 4	136		3 6	179
				3 7	183
3 7	2 3	97		3 8	188
	2 4	99			
	2 5	104	4 0	2 6	134
	2 6	108		2 7	139
	2 7	111		2 8	143
	2 8	113		2 9	147
	2 9	118		2 10	159

Girth. F. I.	length F. I.	Weight. pounds.
4 0	2 11	155
	3 0	161
	3 1	165
	3 2	169
	3 3	174
	3 4	178
	3 5	182
	8 6	188
	3 7	192
	3 8	196
	3 9	202
	3 10	206
4 1	2 6	140
	2 7	144
	2 8	148
	2 9	153
	2 10	158
	2 11	162
	3 0	168
	3 1	172
	3 2	178
	3 3	182
	3 4	186
	3 5	190
	3 6	196
	3 7	200
	3 8	204
	5 9	210
	3 10	214
4 2	2 6	144
	2 7	148
	2 8	154
	2 9	158
	2 10	164
	2 11	168
	3 0	174
	3 1	179
	3 2	183
	3 3	188
	3 4	193
	3 5	197
	3 6	203
	3 7	207
	3 8	213
	3 9	217
	3 10	223
4 3	2 6	150
	2 7	155
	2 8	161
	2 9	165
	2 10	171
	2 11	177
	3 0	182
	3 1	186
	3 2	190
	3 3	196
	3 4	202
	3 5	207
	3 6	211
	3 7	216
	3 8	221
	3 9	227
	3 10	232
4 4	2 6	157
	2 7	161
	2 8	167
	2 9	172
	2 10	178
	2 11	183
	3 0	189
	3 1	195
	3 2	199
	3 3	203
	3 4	209
4 4	3 5	214
	3 6	220
	3 7	224
	3 8	230
	3 9	235
	3 10	241
4 5	2 8	174
	2 9	179
	2 10	185
	2 11	190
	3 0	196
	3 1	202
	5 2	207
	5 3	213
	3 4	217
	3 5	223
	3 6	228
	3 7	234
	3 8	239
	3 9	245
	3 10	251
	3 11	256
	4 0	262
4 6	2 8	181
	2 9	186
	2 10	192
	2 11	197
	3 0	203
	3 1	209
	3 2	214
	3 3	220
	3 4	225
	3 5	231
	3 6	237
	3 7	242
	3 8	248
	3 9	253
	3 10	260
	3 11	266
	4 0	271
4 7	2 8	188
	2 9	193
	2 10	199
	2 11	204
	3 0	211
	3 1	217
	3 2	223
	3 3	228
	3 4	234
	3 5	239
	3 6	246
	3 7	252
	3 8	258
	3 9	263
	3 10	270
	3 11	276
	4 0	281
4 8	2 8	193
	2 9	199
	2 10	206
	2 11	211
	3 0	217
	3 1	224
	3 2	230
	3 3	235
	3 4	242
	3 5	248
	3 6	255
	3 7	260
	3 8	266
	3 9	272
	3 10	279
	5 11	284
	4 0	291
4 9	2 10	214
	2 11	220
	3 6	227
	3 1	232
	8 2	239
	3 3	245
	3 4	252
	3 5	258
	3 6	265
	3 7	270
	3 8	277
	3 9	283
	3 10	290
	3 11	295
	4 0	302
	4 1	308
	4 2	315
4 10	3 0	234
	3 1	239
	3 2	246
	3 3	253
	3 4	260
	3 5	267
	3 6	273
	3 7	279
	3 8	286
	3 9	293
	3 10	300
	3 11	307
	4 0	314
	4 1	319
	4 2	326
	4 3	332
	4 4	339
4 11	3 0	244
	3 1	249
	3 2	256
	3 3	263
	3 4	270
	3 5	277
	3 6	284
	3 7	291
	3 8	298
	3 9	305
	3 10	311
	3 11	318
	4 0	325
	4 1	332
	4 2	337
	4 3	346
	4 4	351
5 0	3 6	294
	3 7	301
	3 8	307
	3 9	314
	3 10	321
	3 11	328
	4 0	336
	4 1	342
	4 2	349
	4 3	353
	4 4	363
	4 5	370
	4 6	378
	4 7	384
	4 8	391
5 0	4 9	398
	4 10	402
	4 11	412
	5 0	420
5 1	3 6	304
	3 7	311
	3 8	318
	3 9	325
	3 10	332
	3 11	337
	4 0	343
	4 1	354
	4 2	358
	4 3	368
	4 4	375
	4 5	382
	4 6	391
	4 7	398
	4 8	403
	4 9	412
	4 10	419
	4 11	423
	5 0	434
5 2	3 6	312
	3 7	319
	3 8	326
	3 9	333
	3 10	342
	3 11	350
	4 0	360
	4 1	365
	4 2	372
	4 3	381
	4 4	388
	4 5	395
	4 6	403
	4 7	410
	4 8	417
	4 9	426
	4 10	433
	4 11	440
	5 0	448
5 3	3 6	323
	3 7	330
	3 8	339
	3 9	346
	3 10	354
	3 11	361
	4 0	370
	4 1	378
	4 2	385
	4 3	393
	4 4	400
	4 5	412
	4 6	416
	4 7	424
	4 8	431
	4 9	437
	4 10	447
	4 11	455
	5 0	462
5 4	3 8	349
	3 9	357
	3 10	364
	3 11	372
5 4	4 0	381
	4 1	389
	4 2	396
	4 3	405
	4 4	409
	4 5	421
	4 6	428
	4 7	437
	4 8	444
	4 9	452
	4 10	461
	4 11	469
	5 0	476
	5 1	484
	5 2	493
5 5	3 8	360
	3 9	368
	3 10	377
	3 11	385
	4 0	393
	4 1	399
	4 2	407
	4 3	416
	4 4	424
	4 5	433
	4 6	441
	4 7	449
	4 8	456
	4 9	465
	4 10	472
	4 11	482
	5 0	490
	5 1	498
5 6	3 8	371
	3 9	379
	3 10	389
	3 11	398
	4 0	406
	4 1	414
	4 2	423
	4 3	431
	4 4	438
	4 5	448
	4 6	456
	4 7	465
	4 8	472
	4 9	482
	4 10	490
	4 11	500
	5 0	508
	5 1	517
	5 2	524
5 7	3 8	382
	3 9	391
	3 10	400
	3 11	410
	4 0	420
	4 1	427
	4 2	435
	4 3	444
	4 4	452
	4 5	462
	4 6	470
	4 7	479
	4 8	487
	4 9	497
	4 10	505
	4 11	514
	5. 0	522
	5 1	532
	5 2	540
	5 3	549
5 8	4 0	431
	4 1	438
	4 2	447
	4 3	456
	4 4	465
	4 5	475
	4 6	483
	4 7	493
	4 8	501
	4 9	511
	4 10	518
	4 11	528
	5 0	538
	5 1	546
	5 2	554
	5 3	564
	5 4	573
5 9	4 0	441
	4 1	451
	4 2	462
	4 3	476
	4 4	483
	4 5	490
	4 6	500
	4 7	508
	4 8	517
	4 9	526
	4 10	536
	4 11	546
	5 0	554
	5 1	564
	5 2	573
	5 3	581
	5 4	590
5 10	4 0	456
	4 1	465
	4 2	475
	4 3	487
	4 4	496
	4 5	504
	4 6	514
	4 7	522
	4 8	532
	4 0	542
	4 10	550
	4 11	560
	5 0	570
	5 1	580
	5 2	588
	5 3	599
	5 4	608
	5 5	617
	5 6	627
5 11	4 0	469
	4 1	479
	4 2	489
	4 3	500
	4 4	510
	4 5	518

Girth. F. I.	length. F. I.	Weight pounds.
5 11	4 6	528
	4 7	538
	4 8	547
	4 9	557
	4 10	570
	4 11	577
	5 0	587
	5 1	596
	5 2	606
	5 3	616
	5 4	626
	5 5	635
	5 6	645
6 0	4 3	514
	4 4	524
	4 5	533
	4 6	543
	4 7	550
	4 8	563
	4 9	574
	4 10	584
	4 11	591
	5 0	603
	5 1	615
	5 2	623
	5 3	634
	5 4	643
	5 5	654
	5 6	665
	5 7	672
6 1	4 3	528
	4 4	538
	4 5	546
	4 6	555
	4 7	568
	4 8	578
	4 9	589
	4 10	599
	4 11	605
	5 0	622
	5 1	631
	5 2	641
	5 3	652
	5 4	662
	5 5	672
	5 6	683
	5 7	693
	5 8	703
6 2	4 3	542
	4 4	552
	4 5	561
	4 6	572
	4 7	582
	4 8	592
	4 9	605
	4 10	615
	4 11	625
	5 0	636
	5 1	647
	5 2	656
	5 3	667
	5 4	678
	5 5	689
	5 6	700
	5 7	710
	5 8	720
6 2	5 9	732
	5 10	742
	5 11	752
6 3	4 3	556
	4 4	566
	4 5	578
	4 6	591
	4 7	599
	4 8	610
	4 9	622
	4 10	631
	4 11	644
	5 0	655
	5 1	665
	5 2	675
	5 3	686
	5 4	697
	5 5	708
	5 6	720
	5 7	731
	5 8	741
	5 8	753
	5 10	763
	5 11	774
6 4	4 3	571
	4 4	581
	4 5	592
	4 6	605
	4 7	615
	4 8	626
	4 9	638
	4 10	647
	4 11	659
	5 0	672
	5 1	682
	5 2	693
	5 3	706
	5 4	715
	5 5	727
	5 6	739
	5 7	749
	5 8	760
	5 9	773
	5 10	783
	5 11	792
6 5	4 3	587
	4 4	598
	4 5	607
	4 6	620
	4 7	633
	4 8	643
	4 9	655
	4 0	666
	4 1	678
	4 0	689
	4 11	700
	4 12	710
	5 3	722
	5 4	734
	5 5	745
	5 6	757
	5 7	769
	5 8	778
	5 9	790
	5 10	802
	5 11	813
6 5	6 0	825
6 6	4 3	605
	4 4	615
	4 5	626
	4 6	643
	4 7	651
	4 8	661
	4 9	672
	4 10	685
	4 11	693
	5 0	700
	5 1	717
	5 2	728
	5 3	741
	5 4	752
	5 5	763
	5 6	776
	5 7	787
	5 8	798
	5 9	811
	5 10	822
	5 11	834
	6 0	846
	6 1	858
6 7	4 6	655
	4 7	666
	4 8	678
	4 9	690
	4 10	703
	4 11	715
	5 0	727
	5 1	739
	5 2	750
	5 3	763
	5 4	774
	5 5	787
	5 6	799
	5 7	812
	5 8	823
	5 9	836
	5 10	847
	5 11	860
	6 0	872
	6 1	886
	6 2	896
	6 3	909
	6 4	920
6 8	5 0	743
	5 1	756
	5 2	767
	5 3	780
	5 4	792
	5 5	805
	5 6	818
	5 7	830
	5 8	841
	5 9	855
	5 10	867
	5 11	879
	6 0	892
	6 1	904
	6 2	916
	6 3	928
	6 4	941
	6 5	955
	6 6	967
6 9	5 0	764
	5 1	777
	5 2	790
	5 3	802
	5 4	815
	5 5	827
	5 6	840
	5 7	853
	5 8	865
	5 9	878
	5 10	890
	5 11	903
	6 0	917
	6 1	930
	6 2	942
	6 3	955
	6 4	967
	6 5	980
	6 6	993
6 10	5 0	783
	5 1	795
	5 2	808
	5 3	822
	5 4	834
	5 5	847
	5 6	860
	5 7	871
	5 8	885
	5 9	899
	5 10	913
	5 11	927
	6 0	939
	6 1	952
	6 2	965
	6 3	977
	6 5	990
	6 5	1004
	6 6	1016
6 11	5 0	802
	5 1	816
	5 2	829
	5 3	843
	5 4	855
	5 5	869
	5 6	883
	5 7	896
	5 8	909
	5 9	923
	5 10	937
	5 11	951
	6 0	963
	6 1	976
	6 2	988
	6 3	1002
	6 4	1016
	6 5	1030
	6 6	1043
	6 7	1057
7 0	5 3	862
	5 4	876
	5 5	890
	5 6	904
	5 7	917
	5 8	931
	5 9	945
	5 10	959
7 0	5 11	973
	6 0	987
	6 1	1001
	6 2	1014
	6 3	1028
	6 4	1042
	6 5	1056
	6 6	1070
	6 7	1084
	6 8	1096
	6 9	1110
7 1	5 3	883
	5 4	897
	5 5	911
	5 6	925
	5 7	939
	5 8	953
	5 9	967
	5 10	981
	5 11	995
	6 0	1009
	6 1	1023
	6 2	1036
	6 3	1051
	6 4	1065
	6 5	1079
	6 6	1093
	6 7	1107
	6 8	1121
	6 9	1135
	6 10	1149
7 2	5 3	903
	5 4	916
	5 5	930
	5 6	945
	5 7	960
	5 8	974
	5 9	988
	5 10	1002
	5 11	1016
	6 0	1032
	6 1	1046
	6 2	1060
	6 3	1075
	6 4	1089
	6 5	1103
	6 6	1117
	6 7	1120
	6 8	1147
	6 9	1161
	6 10	1175
7 3	5 3	925
	5 4	939
	5 5	955
	5 6	969
	5 7	984
	5 8	998
	5 9	1014
	5 10	1028
	5 11	1043
	6 0	1058
	6 1	1072
	6 2	1086
	6 3	1102
	6 4	1116
	6 5	1130
7 3	6 6	1145
	6 7	1159
	6 8	1175
	6 9	1190
	6 10	1204
	6 11	1219
7 4	5 3	946
	5 4	962
	5 5	977
	5 6	991
	5 7	1097
	5 8	1021
	5 9	1037
	5 10	1051
	5 11	1067
	6 0	1082
	6 1	1096
	6 2	1112
	6 3	1127
	6 4	1141
	6 5	1156
	6 6	1172
	6 7	1187
	6 8	1201
	6 9	1217
7 5	5 6	1014
	5 7	1029
	5 8	1044
	4 9	1060
	5 10	1075
	5 11	1091
	6 0	1106
	6 1	1121
	6 2	1157
	6 3	1152
	6 4	1168
	6 5	1182
	6 6	1196
	6 7	1212
	6 8	1228
	6 9	1243
	6 10	1259
	6 11	1275
	7 0	1291
7 6	5 6	1037
	5 7	1054
	5 8	1070
	5 9	1085
	5 10	1100
	5 11	1116
	6 0	1133
	6 1	1148
	6 2	1163
	6 3	1179
	6 4	1194
	6 5	1211
	6 6	1226
	6 7	1242
	6 8	1257
	6 9	1260
	6 10	1289
	6 11	1306
	7 0	1322
7 7	5 6	1063
	5 7	1078

Girth. F. I	length. F. I.	Weight pounds.
7 7	5 8	1093
	5 9	1110
	5 10	1126
	5 11	1142
	6 0	1159
	6 1	1175
	6 2	1190
	6 3	1207
	6 4	1222
	6 5	1239
	6 6	1256
	6 7	1271
	6 8	1287
	6 9	1302
	6 10	1319
	6 11	1336
	7 0	1350
7 8	5 6	1085
	5 7	1100
	5 8	1119
	5 9	1134
	5 10	1849
	5 11	1165
	6 0	1180
	6 1	1196
	6 2	1212
	6 3	1229
	6 4	1246
	6 5	1263
	6 6	1278
	6 7	1294
	6 8	1310
	6 9	1327
	6 10	1344
	6 11	1361
	7 0	1376
7 9	5 6	1109
	5 7	1124
	5 8	1141
	5 9	1158
	5 10	1175
	5 11	1191
	6 0	1210
	6 1	1225
	6 2	1242
	6 3	1260
	6 4	1275
	6 5	1292
	6 6	1310
	6 7	1326
	6 8	1343
	6 9	1361
	6 10	1376
	6 11	1393
	7 0	1410
	7 1	1427
7 10	5 6	1133
	5 7	1149
	5 8	1165
	5 9	1183
	5 10	1200
	5 11	1218
	6 0	1235
	6 1	1252
	6 2	1268
	6 3	1285
7 10	6 4	1303
	6 5	1320
	6 6	1338
	6 7	1355
	6 8	1372
	6 9	1390
	6 10	1406
	6 11	1424
	7 0	1442
	7 1	1460
	7 2	1478
7 11	5 8	1191
	5 9	1210
	5 10	1226
	5 11	1215
	6 0	1263
	6 1	1281
	6 2	1298
	6 3	1316
	6 4	1333
	6 5	1351
	6 6	1369
	6 7	1386
	6 8	1403
	6 9	1421
	6 10	1433
	6 11	1455
	7 0	1473
	7 1	1491
	7 2	1509
8 0	6 0	1289
	6 1	1308
	6 2	1326
	6 3	1344
	6 4	1361
	6 5	1379
	6 6	1397
	6 7	1415
	6 8	1434
	6 9	1450
	6 10	1469
	6 11	1487
	7 0	1505
	7 1	1522
	7 2	1539
	7 3	1544
	7 4	1575
	7 5	1595
	7 6	1613
	7 7	1630
8 1	6 0	1316
	6 1	1338
	6 2	1358
	6 3	1378
	6 4	1394
	6 5	1410
	6 6	1427
	6 7	1444
	6 8	1462
	6 9	1480
	6 10	1498
	6 11	1519
	7 0	1540
	7 1	1555
	7 2	1571
	7 3	1590
8 1	7 4	1609
	7 5	1627
	7 6	1646
	7 7	1663
	7 8	1680
8 2	6 0	1341
	6 1	1359
	6 2	1378
	6 3	1399
	6 4	1415
	6 5	1434
	6 6	1453
	6 7	1473
	6 8	1492
	6 9	1511
	6 10	1527
	6 11	1546
	7 0	1565
	7 1	1583
	7 2	1602
	7 3	1620
	7 4	1639
	7 5	1658
	7 6	1677
	7 7	1695
	7 8	1714
8 3	6 0	1372
	6 1	1390
	6 2	1408
	6 3	1428
	6 4	1448
	6 5	1466
	6 6	1485
	6 7	1504
	6 8	1522
	6 9	1541
	6 10	1561
	6 11	1581
	7 0	1600
	7 1	1618
	7 2	1637
	7 3	1656
	7 4	1676
	7 5	1695
	7 6	1715
8 3	7 7	1733
	7 8	1751
8 4	6 0	1399
	6 1	1417
	6 2	1435
	6 3	1455
	6 4	1476
	6 5	1495
	6 6	1515
	6 7	1533
	6 8	1553
	6 9	1572
	6 10	1592
	6 11	1611
	7 0	1630
	7 1	1649
	7 2	1669
	7 3	1688
	7 4	1708
	7 5	1728
	7 6	1747
	7 7	1765
	7 8	1785
8 5	6 0	1427
	6 1	1446
	6 2	1466
	6 3	1485
	6 4	1506
	6 5	1526
	6 6	1546
	6 7	1565
	6 8	1585
	6 9	1604
	6 10	1625
	6 11	1645
	7 0	1665
	7 1	1684
	7 2	1704
	7 3	1723
	7 4	1744
	7 5	1764
	7 6	1784
	7 7	1803
	7 8	1824

HORTICULTURE.

POMARIUM BRITANNICUM,

An Historical and Botanical account of Fruits, known in Great Britain, by Henry Philips.—Second Edition.

(Continued from page 181.)

ELDER.—SAMBUCUS.

In Botany, a Genus of the Pentandria Trignia Class.

The common elder-tree is a native of England, and is found also in most parts of Europe, as it will grow on any soil, and in situations where few other trees would live.

The elder thrives near wet ditches, and is often seen growing on the ruins of old walls, or from the hollow of decayed trees: so hardy is this valuable and neglected tree, that it is found both in sheltered swamps and on the bleak tops of church towers.

The elder does not appear to have been used medicinally by the ancients, but the berries were employed by the Romans to dye the hair of the head black. If they be boiled in water, says Pliny, they are as good and wholesome to be eaten as other pot-herbs.

Sir J. E. Smith has remarked, that this tree is, as it were, a whole magazine of physic to rustic practitioners.

The bark, leaves, flowers and berries, are used with advantage in medicine. The leaves are said to be purgative and emetic, and are applied externally for the piles and inflammations; an ointment is made also with them as well as the flowers: the latter are used inwardly as a carminative. Infusions made from the flowers while fresh, are gentle, laxative, and aperient; when dry they are found to promote the cuticular secretion, and to be particularly serviceable in erysipelatous and eruptive disorders. Sydenham directs three handfuls of the inner bark to be boiled in a quart of milk and water, till only a pint remains, of which one half is to be taken at night and the other in the morning; and this repeated every day for those afflicted with the dropsy. Boerhaave recommends the expressed juice of the middle bark, given from a drachm to half an ounce, as the best of hydragogues when the viscera are sound.

Elder-flower water, the oil of elder, and elder syrup, are also used as medicines.

The berries are esteemed cordial, and useful in hysteric disorders; and are often put into gargarisms for sore mouths and throats.

The fungous excrescences, which are often found growing on the trunk of the elder-tree, bearing the resemblance of an ear, black in the inside and of a whitish colour on the outside, (called *auriculæ Judæorum*) are accounted good for inflammations and swellings of the tonsils, sore throats, and quinsies.

The wine made from elder-berries is too well known by families in the country to require any encomiums: it is the only wine the cottager can procure, and, when well made, is a most excellent and wholesome drink, taken warm before going to bed. It causes gentle perspiration, and is a mild opiate; and may be taken safely, and with advantage, by those of costive habits.

If a rich syrup be made from ripe elder-berries and a few bitter almonds, when added to brandy it has all the flavour of the very best cherry-brandy.

The white elder-berries, when ripe, make wine, much resembling rich grape-wine.

The buds and the young tender shoots are greatly admired as a pickle.

The leaves of the elder-tree are often put into the subterraneous paths of moles, to drive those noxious little animals from the garden. If fruit-trees, flowering shrubs, corn, or other vegetables, be whipped with the green leaves of the elder branches, insects will not attach to them. An infusion of these leaves in water is good to sprinkle over rose buds, and other flowers, subject to blights and the devastations of caterpillars.

The wood of old elder-trees is so hard, and takes so good a polish, that it is often used as a substitute for the box-tree. From its toughness, it is used for tops for fishing rods, needles for weaving nets, butchers' skewers, &c. I find it was used by the Romans to make pipes and trumpets, as Pliny says, "the shepherds were thoroughly persuaded that the elder-tree, growing in a by-place out of the way, and where the crowing of cocks from any town cannot be heard, makes more shrill pipes and louder trumpets than any other."

FIG.—FICUS.—CARICA.

Natural Order, Scabria. In Botany, a Genus of the Polygamia Triœcia Class.

The fig-tree is evidently a native of that part of Asia, where the garden of Eden is generally said to have been situated, as it is the only tree particularly named in those passages of the Bible which relate to the creation and fall of man. "And they sewed fig-leaves together, and made themselves aprons." It is a fruit that appears to have been highly esteemed by the Israelites, who brought figs out of the land of Canaan, when they were sent by Moses to ascertain the produce and strength of that country.

The fig-tree is often mentioned, both in the Old and New Testament, in a manner to induce us to conclude that it formed a principal part of the food of the Syrian nation. In the 25th chapter of the first book of Samuel, we read, that when Abigail went to meet David, to appease him for the affront given by Nabal her husband, she took with her, amongst other provisions, a present of two hundred cakes of figs.

When Lycurgus banished luxury from Sparta, and obliged the Spartan men to dine in one common hall, to enforce the practice of temperance and sobriety, every one was obliged to send thither his provisions monthly, which consisted of about one bushel of flour, eight measures of wine, five pounds of cheese, and two pounds and a half of figs.

The Athenians were so choice of their figs, that it was forbidden to export them out of Attica. Those who gave information of this fruit being sold contrary to law, were called *sykophantai*, from two Greek words sygnifying the discoverers of figs; and as they sometimes gave malicious information, the term was afterwards applied to all informers, parasites, liars, flatterers, impostors, &c. from whence the word *sycophant* is derived.

The story of Romulus and Remus being suckled by a wolf under a fig-tree, proves that this fruit must have been early known in Italy.

The Egyptians and Greeks held this fruit in great estimation: it was their custom to carry a basket of figs next to the vessel of wine used in the Dionysia, or festivals in honour of Bacchus; and it is related to have been the favourite fruit of Cleopatra, who was the most luxurious queen the world ever produced. The asp with which she terminated her life, was conveyed to her in a basket of figs.

Saturn, one of the Roman deities, was represented crowned with new figs; he being supposed to have first taught the use of agriculture in Italy. There was a temple in Rome dedicated to this god, before which, grew a large fig-tree. The Vestals, when they removed this tree in order to build a chapel on the spot, offered an expiatory sacrifice: this happened about two hundered and sixty years after the foundation of the city.

The fig was a fruit much admired by the Romans, who brought it from most of the countries they conquered, and had so increased the varieties in Italy, by the commencement of the Christian era, that Pliny has furnished us with a description of twenty-nine sorts that were familiar to him. He says, "figs are restorative, and the best food that can be taken by those who are brought low by long sickness, and are on the recovery." He adds, "that figs increase the strength of young people, preserve the elderly in better health, and make them look younger, and with fewer wrinkles. They are so nutritive, as to cause corpulency and strength: for this cause," continues he, "professed wrestlers and champions were in times past fed with figs." This naturalist mentions the African figs as being admired; but says, "it is not long since they began to grow figs in Africa."—These appear to have been of an early kind; for we find when Cato wished to stimulate the senators to declare war against Carthage, he took an early African fig in his hand; then addressing the assembly, he said, "I would demand of you how long it is since this fig was gathered from the tree?" and when they are all agreed that it was fresh gathered, "Yes," answered Cato, "it is not yet three days since this fig was gathered at Carthage: and by it, see how near to the walls of our city we have a mortal enemy." With this argument he prevailed upon them to begin the third Punic war, in which Carthage, that had so long been a rival to Rome, was utterly destroyed. "The Lydian figs," says Pliny, "are of a reddish purple colour; the Rhodian, of a blackish hue; as is the Tiburtine, which ripens before others. The white figs were from Herculaneum, Albicerate, and Aratian; the Chelidonian figs are the latest, and ripen against the winter: some bear twice a year, and some of the Chalcidian kind bear three times a year." The Romans had figs from Chalcis and Chios, &c.; and many of their varieties, it appears, were named from those who first introduced or cultivated them in Italy. The Livian fig was so named after Livia, wife to the Emperor Augustus, who, it is said, made an unnatural use of it to poison her husband.

If the fig-tree was ever brought to this country by the Romans, it was, in all probability, confined to the southern counties; and not being generally cultivated, was destroyed when their villas were demolished. It is generally supposed that it was not planted in England before the reign of Henry the Eighth, when luxury and the arts began to be encouraged, and noblemen's houses first put on the air of Italian magnificence. There are, at the present time, some fig-trees, of the white Marseilles kind, growing in the garden of the Epissopal Palace, at Lambeth, which are said to have been planted by Cardinal Pole, who brought them from Italy during the reign of Henry the Eighth. There is also a fig-tree of the white sort, at Mitcham, in the garden of the manor-house, formerly the private estate of Archbishop Cranmer; and it is confidently stated to have been planted by that prelate: the stem measures thirty inches in girth.

At Oxford, in the botanic garden of the Regius Professor of Hebrew, is a fig-tree, which was brought from the East, and planted by Dr. Pocock, in the year 1648. Of this tree, the following anecdote is related: Dr. Kennicott, the celebrated Hebrew scholar and compiler of the Polyglot Bible, was passionately fond of this fruit; and seeing a very fine fig on this tree that he wished to preserve, wrote on a label, "Dr. Kennicott's fig," which he tied to the fruit. An Oxonian wag, who had observed the transaction, watched the fruit daily, and when ripe, gathered it, and exchanged the label for one thus worded: "A fig for Dr. Kennicott."

We may conclude that the fig-trees, which are stated to have been planted in the time of Henry the Eighth, either had not fruited, or were but little known at that period; as Tusser, who has furnished us with a list of the fruits which were grown in England in the succeeding reign, has not mentioned the fig-tree; and Lord Chancellor Bacon, who wrote still later, never mentions it as being cultivated in England, though, from the exalted situation he filled, and the circles in which he moved, he must have had great opportunities of knowing the earliest introduction of trees and plants, which occupied a part of his attention. The almond, which was not introduced until the days of Elizabeth, is particularly mentioned by him as one of our fruits; but the fig is not in his list. He says, "there be divers fruit trees in the hot countries, which have blossoms, and young fruit, and ripe fruit, almost all the year, succeeding one another." And it is said, the orange hath the like with us for a great part of summer; and so also hath the fig.

The Hortus Kewensis informs us, that the fig-tree was planted in this country in 1548; and we find, in Turner's Herbal, that the fig-tree was cultivated here previous to 1562. Gerard says, in 1597, that "the fruit of the fig-tree never cometh to maturity with us, except the tree be planted under a hot wall." Parkinson also, in 1629, says, that "if you plant it not against a brick wall, it will not ripen so kindly;" but much must depend on the situation of the country.

There is an orchard of fig-trees at Tarring, near Worthing, in Sussex, where the fruit grows on standard trees, and ripens as well as in any part of Spain; these trees are so regularly productive, as to form the principal support of a large family. Although the orchard does not exceed three-quarters of an acre, there are upwards of 100 trees, that are about the size of large apple-trees, the branches extending near twenty feet each way from the trunk. Mr. Loud, the proprietor of this little figgery, informs me, that he gathers about 100 dozen per day, during the season, and that he averages the trees to produce him about 20 dozen each: the fruit ripens in August, September, and October, a part of the year when the neighbouring watering places are frequented with fashionable company, that insures a ready sale for this agreeable fruit, at good prices.

The second crop I find has occasionally ripened: the fruit, which, although smaller, is exceedingly sweet, are of the white and purple varieties. Two of these trees are now about seventy-five years old, having been planted in the year 1745 by John Long, who raised them from some old ones in an adjoining garden, near the ruins of the palace of Thomas-à-Becket in that town, who, tradition says, brought these trees from Italy, and planted them himself. The soil of the garden is a deep black loam on chalk.

The trees are but seldom and sparingly pruned, which I conclude is the cause of their being so prolific, as I have remarked that fig-trees rarely produce much fruit where the knife is regularly used. When they grow too luxuriantly, it has been found better to destroy a part of their roots, and to fill up the space, with stones or broken bricks, than to prune the branches too much. Mr. Knight, the president of the Horticultural Society, observes, that there cannot be a more defective manner of cultivating the fig-tree than that which is generally practised by gardeners,—of training them against walls, with their branches perpendicular upwards; the wood, by this means, becomes too luxuriant to produce fruit.

The ancients believed that there existed a sympathy between plants, and they therefore planted rue near their fig-trees, which was said to make the fruit sweeter; and that the rue not only grew more luxuriantly, but more bitter, by being thus neighboured by the fig-tree. I think this is very probable; without having any thing to do with sympathy, as trees and plants will naturally draw juices from the earth most congenial to their nature: the rue may therefore exhaust the earth of those properties suitable for the nourishment of bitter plants, and leave the fig-tree to thrive from a soil, which the former has qualified, by consuming the particles of the earth that are pernicious to sweet-fruits. Shakspeare seems to have been of this opinion when he wrote—

> "And wholesome berries thrive, and ripen best,
> Neighbour'd by fruit of baser quality."

We have now in this country a great variety of this most delicious and wholesome fruit, which is, I believe, the only kind we possess that has sweetness, without acidity or oiliness. It is nourishing, easy of digestion, and grateful to the stomach; and is much esteemed in the countries where it is cultivated: but in England, it seems to please only the refined palates of the higher order of society. In some parts of the coast of Sussex, where this fruit ripens in perfection, I have known it not only neglected by the middle and lower classes, but even mentioned with derision in their disputes.

The fig-tree is distinguished from all other trees we know of, by it's bearing two successive and distinct crops of fruit in one year, each crop being produced on a distinct set of shoots. This climate rarely allows the second crop to come to maturity, except where they are housed. At the Royal Gardens at Kew, there is a fig-house fifty feet in length, where, under the superintendence of Mr. Aiton, this fruit has been forced to the highest pitch of perfection: Mr. Aiton's chief reliance has been, I understand, on the second crop. In the year 1810, the royal tables were supplied with more than two hundred baskets of figs from that fig-house, fifty baskets of which were from the first crop, and one hundred and fifty baskets from the second. In one instance, Mr. Aiton had this fruit ripe in January, and sent excellent figs to the palace on the late Queen's birthday, the 18th of that month.

The caprification of figs was practised by the ancients in the same manner as it is now attended to by the inhahitants of the Archipelago; and it is described by Theophrastus, Plutarch, Pliny, and other authors of antiquity. It is too curious a circumstance in the history of the fig-tree to be omitted, as it furnishes a convincing proof of the reality of the sexes of plants. The flowers of the fig-tree are situated within the pulpy receptacle, which we call the fruit. Of these receptacles, in the wild fig-tree, some have male flowers only, and others have male and female.

In the cultivated fig, these are found to contain only female flowers, that are fecundated by means of a kind of gnat bred in the fruit of the wild fig-trees, which pierces that of the cultivated, in order to deposit its eggs within; at the same time diffusing within the receptacle the farina of the male flowers: without this operation, the fruit may ripen, but no effective seeds are produced. Hence it is that we can raise no fig-trees from the fruit of our gardens, having no wild figs to assist the seed. They are consequently raised by cuttings, or by layers.

In many parts of the Grecian Islands, the inhabitants pay such attention to the caprification of the cultivated figs, that they attend daily for three months in the year to gather these little flies from the wild fig-trees, and to place them on the fig-trees in their gardens, by which means they not only get finer fruit, but from ten to twelve times the quantity; thus one of the most minute insects is, by the attention of man, made a principal cultivator of fruit.

It is a curious fact, that fresh-killed venison, or any other animal food, being hung up in a fig-tree for a single night, will become as tender, and as ready for dressing, as if kept for many days or weeks in the common manner. A gentleman, who lately made the experiment, assured me that a haunch of venison which had lately been killed, was hung up in a fig tree when the leaves were on, at about ten o'clock in the evening, and was removed before sun-rise in the morning, when it was found in a perfect state for cooking; and he adds, that in a few hours more it would have been in a state of putrefaction.

In the neighbourhood of Argenteuil, near Paris, are immense fields covered with fig-trees: the inhabitants of the former town derive their chief support from the culture of this fruit; and I feel confident that there are many situations on the coast of Sussex, between the towns of Arundel and Shoreham, where if figs were cultivated, the London markets could be amply supplied with this nutritious fruit.

We import the best dried figs from Turkey, Italy, Spain, and Provence. In the south of France, they are prepared by dipping them in scalding hot lye made of the ashes of the fig-tree, and then dried in the sun.

For medical purposes, figs are chiefly used in emollient cataplasms and pectorial decoctions.

The wood of the fig-tree is of a spongy texture, and, when charged with oil and emery, is much used on the continent by locksmiths, gunsmiths, and other artificers in iron and steel, to polish their work. This wood is considered almost indistructible, and on that account was formerly used in Egypt and other Eastern countries, for embalming bodies.

I shall conclude my account of the fig-tree, by the well-known story of Timon of Athens, who was called *misanthrope*, for his aversion to mankind and to all society. He once went into the public place, where his appearance as an orator soon collected a large assembly, when he addressed his countrymen, by informing them that he had a fig-tree in his garden, on which many of the citizens had ended their lives with a halter; and that, as he was going to cut it down, he advised all those that were inclined to leave the world, to hasten and go hang themselves in his garden.

(To be continued.)

EXTRACTS AND REMARKS

On Italian Agriculture, communicated for the American Farmer, by S. Hambleton, Esq. U. S. Navy.

Continued from page 162.

NAPLES—ASPECT, SOIL, &c.

"From the national disposition of the Neapolitans, the result of their manners and government, it follows that *agriculture* must be almost the only art which they cultivate. Without vanity or ambition, they have no idea of parade, nor even of that external appearance of comfort, by which people in other countries wish to excite envy. The liberal and even the mechanical arts are unknown to them. All the objects of luxury, and most of those of the first necessity are supplied by strangers, who carry back in exchange the superfluous productions of this fertile soil.

Corn is cultivated in the plains and vallies, and frequently gives eight or ten for one. The ground instead of being allowed to rest for a year, according to the custom of the ancient Romans, is ploughed directly in order to receive the seed of another crop; and these different crops grow in the volcanic ashes with unparalleled vigour. Thus every autumn and every spring renews the hopes of the labourer, and he is rarely disappointed. Frequently, after the harvest, they plough up the land and sow red or purple clover, which is indigenous in the South; round the fields grow mulberry trees and elms, that cover them with their shade, and serve at the same time to support the vine, which, spreading over their branches, makes the same soil produce several crops at once.

The greatest part of the kingdom is mountainous;—some of the highest preserve the winter snows on their summits during the whole year. Pastures are found on their highest summits where innumerable flocks feed during the summer, for their thick verdure is never destroyed by the heat. Below this region of herbage begin the forests of chesnuts, which grow to an enormous size; and on the lower slopes of these mountains are woods of olive trees.

Round the villages they have fig-trees growing in the rubbish, lemon trees in the gardens, and fruit trees round the enclosures. We see orange trees for the first time near Fendi.

In the neighbourhood of Naples the fields are often covered with elms, the branches supporting the vines hanging in festoons between them; and under this shade are seen beans, Indian corn, or melons. The country women here are not at all handsome; their physiognomy is harsh, and their complexion of an olive colour; nor is their costume elegant. The small farmers are very poor, and only farm as much land as they can cultivate with their families;—that is four or five acres. They keep for themselves only a third of the crop, the remainder belonging to the landlord, to whom it is paid in kind through the hands of his *Fattore*. They have no ploughs, and work only with the spade; but the earth being mixed with volcanic ashes is easily stirred, and the occasional showers of ashes from Vesuvius, contribute much to fertilize it.

These farmers gather with care not only the fruits, but also the leaves of their trees, which serve to feed their cattle in winter. Melons are cultivated successively between the rows of elms, after which corn is sown. When it is carried the whole family go and dig up the stubble, and sow beans on the purple clover. During six months the children go every morning and cut with a sickle a load of the clover for the cows. They have goats also, and sometimes an ass or little horse for going to town and carrying burdens; but this is an advantage belonging only to the better sort.

In the following spring, Indian corn is planted on the stubble of the clover or beans. The land is then manured, and on this crop depends the food of the family. The Indian corn is hardly reaped when the ground is turned up for corn again; but after this second harvest, they only cultivate different kinds of vegetables.

From these details it appears that there is a regular rotation of crops in the ashy soil round Vesuvins, which is regulated nearly in the following way:

First year, Indian corn manured.
Second do. Corn.
Third do. Onions and vegetables.
Fourth do. Corn, followed by beans or red clover.
Fifth do. Melons.

5 years—6 crops.—That is to say, this rotation affords six crops in five years, of which four are leguminous, and two in corn, besides the produce of the vines, the fruits and leaves from the same soil. This system of culture is almost entirely destined for the food of man, the 6th crop only, for which they are indebted to the climate, being reserved for the cattle. The variety of vegetables, skilfully intermixed in this rotation, keeps up the fertility of the soil with little manure; but, at the same time,

nature, by giving it a volcano in its neighbourhood, has established an eternal source of fertility.

To be convinced of this, one need only remark that this volcanic ground will support a family of five persons with a third of the produce of five acres. These families certainly live very soberly and consume more vegetables and fruits than corn; but, in fine, they live. Such an instance of fertility and of great population can perhaps no where else be found but in India; for it amounts to 5,000 souls in a square mile, in the circumference over which Vesuvius throws its ashes.

Beyond Pompeia we see no longer any traces of the disorder caused by Mount Vesuvius. The coast extends in almost innumerable slopes, on which grow together olives and mulberries, vines and oranges. This favoured tract occupied all the space between Sorrento and Salerno, and is distinguished by the name of *Piave di Sorrento*. The plain of Sorrento is almost the only part of the kingdom of Naples in which one can discern the action of an active and enlightened industry. It is in this fine region also that the farmers have attempted, with great success, the cultivation of cotton; insomuch that, in the year 1812, they supplied the manufactures of Europe with 60,000 bales of that essential article. With respect to their method of cultivating it, they merely dig up the ground in March and sow the cotton in rows at the distance of three feet. In these rows the plants are only two feet from each other. The ground is so rich, that it requires no manure, but only to be kept constantly clean.

The rotation of crops adopted in the Volcanic country round Vesuvius, leaving no vacancy for the cultivation of cotton, it became necessary to change the course of crops, and to adopt another which is perhaps the most productive in the world.

The farmers not being able to subsist without the different crops established by the ancient economy of the country, still continue to begin their system of rotation by the Indian corn, for which they manure the ground. Corn succeeds, and then beans are sowed immediately after harvest. This plant being destined only for feeding the cattle during winter, is consumed early, and the soil can thus be prepared by the end of March, without any impediment, for receiving the cotton seed.—After it is gathered, corn is sown again in the same autumn, to which immediately succeeds the red clover.—After the clover comes melons; and when they are ripe, vegetables occupy the ground till spring, and terminate the rotation of which this is the formula:

First year, Indian corn manured.
Second do. Corn, followed by beans.
Third do. Cotton.
Fourth do. Corn, followed by clover.
Fifth do. Melons, followed by vegetables.

5 years. 8 crops.

This course therefore supplies eight crops in five years, two of which are corn, three legeumes, one commercial, and two destined for the cattle. By this variety the soil is enabled to produce all that the earth can possibly afford to human industry."—Page 513.

Naples—Although not within the scope of my design, I am tempted to give you a short extract alluding to this place, which I know to be correct.—

"To a student of nature, to an artist, to a man of pleasure, to any man who can be happy among people who seldom even affect virtue, perhaps there is no residence in Europe so tempting as Naples and its environs. A climate where 'Heaven's breath smells sweet and wooingly'—the most beautiful interchange of sea and land—wines, fruits, provisions in their highest excellence—a vigorous and luxuriant nature, unparalleled in its productions and processes—all the wonders of volcanic powers, spent or in action—antiquities different from all antiquities on earth—a coast which was once the fairy land of Poets, and the favourite retreat of great men. Even the tyrants of the creation loved this alluring region, spared it, adorned it, lived in it, died in it. This country has subdued all its conquerers, and continues to subvert the two great sexual virtues, guardians of every other virtue—the courage of the men, and the modesty of the women."

TOBACCO, of fine quality successfully raised in Pennsylvania, from Cuba Seed—With some useful hints on providing plants early in the spring, and judicious selections on the phenomena and process of curing by a scientific and experimental agriculturist.

EXTRACT FROM THE GREENSBURGH GAZETTE, OF THE 5th JULY, 1822.

Tobacco has hitherto been looked upon as one of those plants which our climate is too inhospitable to nourish to maturity, certainly, it has never before been cultivated here with such success as to render it a profitable or even a safe crop.—But an experiment in its culture is now making by A. W. Foster, Esq. of this place which promises to be crowned with success. He procured some Havana seed and by the aid of a hot-bed, had his plants ready for setting out at a much earlier period than could otherwise have been done, as early, indeed as the frost would permit their exposure. His lot of about an acre adjoining this town now presents a promising appearance of a fine crop. The plants are remarkably vigorous and healthful, generally from 20 to 30 inches high with from 12 to 20 leaves each. Some choice ones on the 1st inst. measured in height 43 inches, have 22 leaves, some of which are 20 inches long and 14 broad. From their being so far forward now, it may safely be anticipated that they will have ample time to reach complete maturity before the frost, and if there be any peculiar advantage to be derived to the quality of the plant by the warm suns, of the long summer days, this crop will surely have a full share of it.

Extract from the same paper of July 26, 1822.

You noticed in your paper of the 5th inst. the growth of a crop of Tobacco, in one of the out lots adjoining this place, from plants raised in a hot bed, from seeds procured from the Havana. Its progress from that time has been astonishingly great. The blossoms of some stalks left for seed, have already fallen, and the pods are full of seed. Last week and this, three or four cart loads have been cut and housed, some of the leaves measure twenty five inches long and sixteen broad. The remainder appears to be ripening fast. The seed we are assured is of the very best quality of tobacco raised in the Island of Cuba, and procured in that district of country called in Havana, "Vuelta Abago," which is so peculiarly sought after, for the manufacture of cigars; we are assured that this tobacco, sells in the Havana, for eighty dollars per hundred. If by means of the hot-bed, tobacco even of the quality of the James' River sweet leaf could be raised in this country, it may form an important article in its exports. The luxuriance of vegetation in early plants, as already evidenced in the experiment made, would appear to more than compensate for the expence of the hot bed; and may at least place us on an equality in raising this article, with more Southern latitudes.

TO THE EDITOR OF THE AMERICAN FARMER.

Greensburgh, 28th August 1822.

DEAR SIR,

I duly received your letter of the 14th instant in the course of last week, during the hurry of the court then sitting in this place, and am now much engaged in preparing for the supreme court which commences its session for the Western District at Pittsburgh on Monday next.

In readily attempting to comply with your request, the circumstances mentioned must excuse my delay, and also form my apology for any imperfection in this communication; I had procured through the intervention of a friend, a quantity of tobacco seed from the Havana, about the beginning of March last, had a hot bed prepared about fourteen feet long, and three feet wide, covered with glass, in the usual form, the stable manure perhaps thirty inches deep covered with rich garden mould about six inches deep, with this I mixed four boxes of stone coal ashes, and about four quarts of hickory ashes. The seed was mixed with perhaps a pint of plaster of Paris, as well for the purpose of a manure as the more easily to sow the seed evenly. Then put about an inch deep of garden mould, passing the mould through a riddle, on one part; and half an inch on another part, then placed a board across the bed, and had it pressed down. Subsequent experience, proved the compost to be of the best possible quality; the plants grew with the greatest luxuriance, and although frequently *almost daily*, watered with three or four watering cans, full of water at a time, the earth remained loose and open. I found however the earth to be not sufficiently deep, as I was much annoyed by the rising of mushrooms, or as they are sometimes called toad stools. This probably would not have been the case in so great a degree, had the earth been ten or twelve inches deep; that part of the bed also which was covered the deepest produced scarcely any plants, and I had therefore to transplant into it, from other parts of the bed, where the seed had been covered lighter, and where the plants appeared to be too close; a small bug which appeared shortly after the plants rose and destroyed some, disappeared entirely on making a leach of soot, and watering the plants and bed with it.

I commenced transplanting into the lot prepared for the purpose on the 3d of May. The leaves then about the size of a dollar and larger, many plants were destroyed by the common cutworm, which had to be replanted, and against which I discovered no remedy but time, attention and patience.

On the 17th June one plant measured from the top of the hill 23 inches in height, a leaf 13½ inches long, and 9 inches broad, 14 leaves on the stalk.

On the 1st July one plant measured 3 feet 3½ inches in height, one leaf 17 inches long, and 10 inches broad with 20 leaves on the stalk, another plant which had been topped early by accident, having only 7 leaves, one of which measured 20 inches in length, and 14 inches broad.

On the 10th of July the height of one plant was 5 feet 3 inches, length of one leaf 22½ inches in breadth 15¾ inches, the next day I measured another stalk 5 feet 10 inches in height.

On the 15th of July two stalks were cut bein fully ripe, 1st stalk had 11 leaves, 23 inches long 15 inches broad; 2d do. 7 leaves, one of which measured 24 inches long, 16 inches broad.

On the 31st July finished cutting one lot of first planting about half an acre.

On the 7th August pulled one pod of Tobacco seed fully ripe.

On the 27th August, finished cutting the 2d crop on above being fully ripe.

The foregoing is an abstract from memoranda made at the several dates mentioned.

The ground upon which I planted was about rich enough to produce good potatoes, had rather a westwardly exposure. A person a few miles from this, Mr. Francis Lytle, to whom I had given some seed, in a richer soil, and south exposure, had some plants the leaves of which measured 31 inches long, and 21 inches broad, with from 17 to 23 leaves on the stalk, the leaves are rounding at the stalk, and at the end like a shovel. The one I have last mentioned had the greatest number of superficial inches that I have ever heard of or seen in a tobacco leaf.*

The curing, was the rock upon which I feared to split, having no practical knowledge on the subject and but little time to bestow upon it.—The two stalks first cut, which I had placed in different situations, afforded me an Index pointing out the true path, and I believe I have so far succeeded. The season being hot and dry, a deviation became necessary from the course usually pursued when more advanced; after being cut it must neither be suffered to remain so long exposed to the sun, nor after removed so long in bulk before it is hung up as is generally recommended. It must also be hung closer and more care must be taken, during the progress of curing, to keep it compact; in the first case it will decompose, and the essential oil will escape, in the second the water will evaporate, and the green colouring matter will remain in the leaf.

The whole secret appears to be in expelling the colouring matter and preserving the essential oil in which the aroma exists.

The volatile parts of tobacco are water, the colouring matter and the essential oil; water is the most volatile, and if a single leaf or a single stalk is hung up separately, the water soon escapes, the pores of the leaf close and the green colouring matter remains.

At this season, when it is hung up, there is no danger of heating under so dry an atmosphere, nor does there appear the least necessity of incurring the risque of heating it, by letting it lie in bulk; on the contrary, if it is hung up in mass, close, and compact, and kept so during the process of curing the mass will remain moist for two or three weeks. The leaves in the first place assume a yellow colour, the blue part of the colouring matter, (for green although one of the prismatic colours is well known to be a compound of blue and yellow,) will in the meantime escape and by a new combination probably of oxygen with the tannin principle, the leaf becomes brown. The essential oil is the least volatile; nevertheless, if suffered to remain in bulk beyond a certain point of fermentation, a decomposition will take place and the essential oil escape. I had a few stalks thus injured by suffering it to lie in Bulk from 5 o'clock in the afternoon, until 11 o'clock in the forenoon of the next day.

In all vegetables there appears to be a gummy substance subject to fermentation in bulk, after the vegetable is dried under the ordinary heat of our atmosphere in a separate state, such is the case after hay is put into the barn. And even flour, when sent from this country to New Orleans, and from thence to England in certain seasons, owing to this fermentation, will be cemented into a solid mass. This, I am told, is prevented by kiln drying the wheat, the fermentation is produced at the time of drying, such I presume would be the case with Tobacco, which is cured by fire.

I have had some cigars made of the tobacco, from leaves partially dried, which have all the indications of the family from which the plant is descended, nothing of the nauseating taste of the common cigar, the ashes also being remarkably white, and remaining until the cigar is half smoked, in fact till it falls by its own gravity and the increase of leverage, by the remoteness of the extreme point of the ashes from the cigar. The leaf is also remarkably sweet. I send you an ordinary one from a stalk brought this day from the tobacco house, where my boys are putting it in bulk; it was brought in, on account of its appearing more fully cured than some others.*

I am well assured that whatever may be my fate in making this experiment, at least my cigars will be well puffed.

Very respectfully,
Your obedient servant,
J. S. Skinner, Esq. A. W. FOSTER.

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* *Several persons in this country were induced to try the experiment of raising tobacco this year. From the success with which it has been attended, I am confident it will be very generally tried next year. There is scarcely a farmer that could not raise an acre or more, without any inconvenience. This, though small in the detail, would be considerable in the aggregate: I have been assured by the gentleman who forwarded me the seed, and whom I have seen since my former communication, that it is the choicest seed of the Island, and I have yet enough of it to plant* 1000 *acres.*

* *This leaf we have exhibited to several respectable manufactures, who have pronounced it of good quality, and better flavour than the tobacco generally brought to this market, but much inferior to that raised from the same kind of seed in Cuba. We have had the leaf made into cigars, and tried by good judges, who think they partake somewhat of the Spanish Cigar. The value of this tobacco, to manufactures, is not worth more than the ordinary kinds; but for shipping, particularly for the Bremen market, if in the curing a good* bright yellow *can be given to it, without regard to flavour, will readily bring from* $10 *to* $15.—Edit. Am. Farmer.

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PRODUCTS OF FLORIDA.

A writer in the Floridian, published in Pensacola, states a fact which may be interesting to many persons—"It may perhaps be gratifying to your readers to learn that among the abundant vegetable productions of West Florida, the Quercus Cerris or Oriental Oak stands in the first class. It owes its importance principally to the production of Nut galls—they have hitherto been imported from the Mediterranean at a great expense, and their importance in manufactures is well known.—They are the production of an insect or an *hymenopterous* species. The *Cynops Quercifolu*, who deposit their eggs on the leaves and tender branches of the tree—an excrescence is soon formed around the egg, which enlarges to a ball the size of a bullet, enclosing the egg—which in process of time is hatched, and the embryo often undergoing several changes, finally eats its way out of its prison. This excrescence is the Nut gall—and those found in Florida are equal in every respect to those imported from the Levant.

This tree seldom attains the height of ten feet, and grows principally in low and wet situations, and the galls cover the branches in great profusion. The writer of this gathered in the space of a few moments several pounds. When it is taken into consideration the importance of this production in Dying and Medicine, their present high price (from 50 to $60 per cwt.) and their not being indigenous in any other part of the United States, we know of nothing that would so well repay the enterprize of any of our citizens, as collecting and sending them to the northward for sale."

Editorial Correspondence.

Extract of a letter to the Editor Am. Farmer, dated Edenton, N. C. 16*th August.*

"Our corn crops are very much injured by the drought.—It is generally believed that there will not be half crops raised in this and the two adjacent counties."

SUBSTRATUM PLOUGHING.

Extract of a letter to the Editor of the American Farmer, dated BROOK GROVE, Montgomery Co. Md. 8*th mo.* 30*th*, 1822.

"Our crops in this neighbourhood are likely to be very short, particularly roots of every description. We have not had rain since planting our summer crops sufficient even to wet the ground plough deep.—We however find a striking difference wherever the substratum plough has been used, as the corn in every instance retains a tolerable colour, and in some instances will yield at least double what the land adjoining, of equal quality, where the common plough only has been used. I can confidently recommend the plan of stirring the sub-soil, and hope that thee will not fail to avail thyself of its great advantages.

In haste, thy friend,
ROGER BROOKE.
John S. Skinner.

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ERRATA.

"In the communication of Judge Peters, on "the subject of Tunisian sheep, our readers "will please to correct the generic term used "by writers of natural history.—For Latica*n*dœ, "read Latica*u*dœ."

THE FARMER.

BALTIMORE, FRIDAY, SEPTEMBER, 6, 1822.

PRICES CURRENT.—CORRECTED WEEKLY.

Red wheat, $1 18 to 1 21—White do., $1 22 1 25—White corn, 75 cts.—Yellow do., 73 cts.—Oats, 33 to 37 cts.—Rye, 50 to 55 cts.—Flour from the wagons, $6 37 a 6 50—Wharf, do. $6 25, 90 days—Shad, from $6 50 to 8 50—Herrings, $3 25 to 3 75—Beef, Northern mess per bbl. $10 to 10 25—Baltimore, prime do. $9 to $9 75—Hams, 10 to 12 cents—middlings, 6 to 8 cents—Cotton, West India, per lb. according to quality, 15 to 25 cents—New Orleans prime, 16 to 18 cents—Georgia, upland, do. 14 to 16 cents—Cheese, N. England, 12 to 15 cents, scarce—Coal, Virginia, per bushel, 25 to 30 cts.—English do., 40 cts.—Flax per lb. 10 to 10½ cents—Hops, fresh, per lb. 10 to 12 cents—Hogs' lard, per lb. 9 to 10 cents—Hides, E. Shore, per lb. 8 to 10 cents—Leather, soal, per lb. 24 to 25 cts.—Upper do., whole hide, $3 to $4 25—Salt, St. Ubes, per bushel, 50 cts.—Cadiz, do. 42 cts.—Liverpool, blown, 40 cts.—Ground do. 50—Turks' Island, 60—Wool, Merino, full blood, per lb. 35 to 40 cts.—Do. mixed, 28 to 30 cts.—Common country do., 20 to 20 cts.

Maryland Tobacco—Fine yellow, none—Good do., $20 to 25—Fine spangled, $16 to 18—Fine red, $12 to 17—Good do., $8 to 10—Very scarce, wanted—Common dark, $3 to 4 50, plenty, no demand—Second do., $1 50 to 3.

HORTICULTURE.

POMARIUM BRITANNICUM,

An Historical and Botanical account of Fruits, known in Great Britain, by Henry Philips. —Second Edition.

(Continued from page 190.)

FILBERT.—CORYLUS.

A species of the Hazle-tree. In Botany, a Genus of the Monœcia Polyandria Class.

Filberts were originally brought out of Pontus into Natolia and Greece, and were therefore called Pontic nuts: from thence they were procured by the Romans, and brought into Italy, where they acquired the name of Abellani, or Avellana, nuts, from Abella or Avellins, a town of Campania; where the best were cultivated, (Plin. b. 15, c. 22.) and from thence arose the French name Aveline.

These nuts still continue to be cultivated in the same situation; and, according to Mr. Swinburn's account, the whole face of the neighbouring valley is covered with them, and which, in good years, brings in a profit of 60,000 ducats (£11,250.)

Fuller, who wrote in the year 1660, says, "gardening was first brought into England, for profit, seventy years ago," in the reign of Queen Elizabeth. He adds, "gardening crept out of Holland into Kent."

It is supposed, that within a few miles round Maidstone in that county, there are more filberts growing at the present time, than in all England besides, there being several hundred acres planted with filbert-trees in the vicinity of that town. The London market is entirely supplied from thence with these nuts, which are excellent in quality, and, if quite ripe, will keep good for several years placed in a dry room.

Filberts are not only much more agreeable than the common nuts, but are esteemed wholesome and nourishing when taken with moderation. The cream of these nuts is good for the stone and heat of urine. Emulsions may also be made of them. The Romans used them with vinegar and wormwood seed for the yellow jaundice.

Filberts are not found to answer well but on very few soils: they seem to like a stony, sandy loam; for in rich soils they grow too luxuriantly to produce fruit, but much depends on the skill and management in pruning these trees. In Kent, they are not suffered to grow above five or six feet high, and are kept with a short stem, like a gooseberry-bush, and very thin of wood, somewhat in the shape of a punch-bowl.

From the class in which the tree is ranged in botany, it will be observed, that the male and female flowers grow quite distinct. The male flower is a scaly catkin, resembling the bullion in fringe; it appears in autumn, and waits for the expansion of the female blossom in the spring, from whence the nut arises: this is very diminutive, but of a fine crimson colour; therefore the pruner should make himself acquainted with the wood that produces each blossom, and not destroy too many of the male flowers that will fall from the tree after they have discharged their pollen, to the benefit of the future fruit.

To preserve filberts, they should be gathered quite ripe, and laid for some days on the floor of a room, where the sun can get in, to dry them effectually.

The Byzantium nut, although much esteemed for it's flavour and size, is but little cultivated in this country, and very rarely seen in our markets. This nut was brought from Constantinople, before Constantine had given his name to that city; and I am much inclined to think, that the Greeks procured it from more eastern countries. They were first cultivated in this country by Mr. John Ray, in 1665, and are generally called Cobnuts.

Pliny informs us, that Vitellius brought the nuts, called *fistichs*, into Italy, a little before the death of Tiberius, and that Flaccus Pompeius, who served in the wars with Vitellius, carried them into Spain. Nuts are now grown in that country in such quantities, according to the account of Mr. Swinburn, that from a single wood, near Recus, sixty thousand bushels have been collected in one year, and shipped from Barcelona, whence they are called Barcelona nuts.

It was the custom among the Romans for the bridegroom, on the night of his marriage, to scatter nuts among the boys, intimating that he dropt boyish amusements, and thenceforth was to act as a man. *(Servius. Pliny.)*

Columella states, that if nuts be steeped in water and honey before they are planted, they will grow more speedily, and produce sweeter fruit.

GOOSEBERRY.—GROSSULARIA.

In Botany, a Species of the Ribes, of the Class Pentandria Monogynia.

The gooseberry, which is now so much and so justly esteemed, is a native of Europe; and as it grew in the woods and hedges about Darlington, Cambridgeshire, Norfolk, and other northern counties, in the wild state, I consider it indigenous to this country, although Drs. Smith and Miller both entertained doubts of its being truly so. It appears not to have been known to the ancients, either in Greece or Rome, as their authors have made no mention of it; but it is noticed by the earliest naturalists who have written in this country, notwithstanding it was a fruit much neglected, according to Allioni's account, who says, "they are eatable, but somewhat astringent." Gerard says, "it is called *feaberry-bush*, in Cheshire, my native country," and I find that it had the same name in Lancashire and Yorkshire. In Norfolk it was abbreviated into *feabes*. It appears to have taken the name of *gooseberry*, from its being used as a sauce for young or green geese.

Gerard says, "These plants do grow in our London gardens, and elsewhere, in great abundance. The fruit is used in divers sawces for meate: they are used in brothes insteade of veriuice, which maketh the broth not onely pleasant to the taste, but it is greatly profitable to such as are troubled with a hot burning ague."

Parkinson says, that "the berries, whilst they are small, green, and hard, are much used to be boiled or scalded, to make sauce for fish or flesh of divers sorts." Green gooseberries have continued to be used as a sauce for mackerel since my memory, in many parts of the country; and they are often mentioned by the French as *grosseilles aux maquereaux*.

The gooseberry, which was but a small berry in the wild state, has, like the apple, been multiplied in it's variety, and brought to it's present size by the art and industry of the English and Dutch gardeners; and it is now deemed one of our most valuable fruits, being so easily propagated and so regular in it's production, furnishing our tables, at all seasons of the year, with a wholesome and agreeable diet. It is the earliest as well as one of the best fruits for spring tarts; and, when ripe, the gooseberry is regarded by all classes of society at the desert, where it appears from July to November, by those who have well-regulated varieties, as some kinds ripen early, while others are not only later, but have the quality of hanging on the bushes until near Christmas: among the last, the Warrington gooseberry is considered the best. I have not attempted to give even the names of all the varieties of this fruit, finding them so numerous, that one nurseryman furnished me with his list, and obliged me with a sight of 300 varieties, the largest of which in weight was equal to three guineas and a half.

Gooseberries are preserved in the green state with little trouble or expense, so as to retain their natural flavour for tarts or cream, &c.; and, when ripe, they make excellent jam, and a delicious and ornamental sweetmeat.

To procure gooseberries large for the table, it is desirable to cut off with a pair of scissars all the small berries, which are equally good for the purpose of tarts.

The wine made from green gooseberries, if properly managed, is but a shade below champaign; and the black gooseberry, when ripe, affords a luscious wine.

The pale gooseberry was first brought from Flanders in the year that Henry the Eighth received the title of *Defender of the Faith.* This monarch, and his daughter Queen Elizabeth, seem to have encouraged the art of gardening, as during their reigns, most of our best fruits and vegetables were first introduced and cultivated in this kingdom; but even during the reign of these sovereigns, gooseberry leaves were used as a salad by those who could not afford to send to Holland for a lettuce.

The gooseberry is but little esteemed on the continent, for want of being more known; and foreigners seem astonished at the size and flavour of this fruit in England. It cannot be propagated with success in the warmer parts of the world; but in this happy island we procure, by the aid of stoves, the finest fruits of the hottest climes; we may therefore justly say with the poet.—

On foreign mountains may the sun refine
The grape's soft juice, and mellow it to wine;
With citron groves adorn a distant soil,
And the fat olive swell with floods of oil;
We envy not the warmer clime, that lies
In ten degrees of more indulgent skies.

It has been a question agitated among physicians, whether fruits be safer before or after meals. The answer to this seems to depend on a knowledge of the stomach. In a weak stomach, they are more apt to be noxious when empty, than when distended with animal food. Here likewise they cannot be taken in such quantity as to hurt. In strong stomachs there is little difference; there they would seem to promote appetite. In weak stomachs even when full, if taken in too great quantity, they may be very hurtful, by increasing the active fermentation of the whole. The ancients alleged, that the mild fruits should be taken before, and the acerb after meals, as being fitter to brace up the stomach, and promote digestion. *(Lectures on the Materia Medica.)*

The gooseberry bush is propagated by cuttings or suckers; but the former way is preferable, as the roots are less likely to shoot out suckers. Straight shoots should be selected about eight inches long, and planted about half the length, in good mould or light earth. The best time for planting them is in the autumn, just before the leaves begin to fall. It is desirable to sow the seeds of ripe gooseberries, as by this means you have the chance of new varieties; and the bushes generally grow in a better shape than either by cuttings or suckers.

In pruning these bushes, observe to keep the stem quite free from shoots, at least that from ten or twelve inches from the ground, there be but one regular stem. I have seen them trained on trellis work, where the fruit has grown and ripened well; and it is a most desirable method for small gardens, as they have a neat appearpnce, take but little room, and form a good back ground to flower-borders.

GOURD.—CUCURBITA.

In Botany, of the Monœcia Syngenesia Class. Natural Order, Cucurbitaceæ.

The plants of this genus are very nearly allied to those of *cucumis*, and of them there is a great variety.

Gourds were more esteemed by the ancients, than either melons or cucumbers. Pliny has minutely described them as different from the pompion or cucumber. He says, "they are employed for more purposes, and are more useful than the former fruit. When properly dressed," he says, "they are a light, mild, and wholesome food. The young and tender stalks," he states, "were dressed and served up to table as a good dish; and the fruit of those that climbed up trees, or walls, or on the frames of arbours, were better food than those which crept on the ground. They have of late," says this author, "been much used for pots and pitchers;" but long before, they had been used as barrels to keep wine in. Both the wild and the garden-gourd was much used in medicine by the Romans, who also employed the seeds as a charm to cure the ague. (Pliny, l. xx. c. 3.)

Gerard says, "the pulp, or meat of the gourd, used as a poultice, mitigates all hot swellings, and takes away the head-ache and the inflammation of the eyes."

The bottle-gourd, *(Lagenaria,)* grows in many parts of the world to near six feet long, and two feet thick. The rinds or shells are used by the negroes in the West-India ialands as bottles, holding from one pint to many gallons. Barham speaks of one that held nine gallons; and the Rev. Mr. Griffith Hughes mentions them, in his History of Barbadoes, as holding twenty-two gallons. The shells are cleared of the pulp and seeds by the negroes in the following manner:—they make a hole at one end, into which they pour hot water, in order to dissolve the pulp, which afterwards is extracted with a stick, and the inside rinsed with sand and water, to loosen and clear away the fibres that remain; they are then dried and become fit for use, and will contain water or other liquids for a length of time.

Sloane mentions one of these gourds as large as the human body. Brown says, "the decoction of the leaves is recommended much in purging clysters, and the pulp of the fruit is often employed in resolutive poultices." He adds, that "it is bitter and purgative, and may be used instead of the common coloquintida." Sloane and Barham describe a sweet gourd, which, the latter says, "grow two or three feet long, as big as a man's thigh, is full of sweet pulp that makes a pleasant sort of sweetmeat or preserve." He says, "the distilled water is good in fevers, and the pulp applied to the eyes abates their inflammation." Sloane says "the seeds are diuretic, and made into emulsions, temper and take off the acrimony of urine."

Lunan describes the squash *(melopeps,)* a small gourd, not exceeding the size of a moderate fist, and which, he says, "when young and properly boiled and dressed with butter and black pepper, is a delicious vegetable." Lourieo says, "this fruit is of great use in long voyages, as it may be kept several months fresh and sweet."

The Gourd, called Vegetable Marrow, is of a pale yellow colour. Those I have seen did not exceed from seven to nine inches in length. It has only been known a few years in this country; and, I believe, was not sold in the shops and markets before the summer of 1819; and although they are of so late an introduction, the accounts are very imperfect: but it seems most probable that the seeds were brought in some East-India ships, and likely from Persia, where it is called *cicader*. It is cultivated in the same manner as cucumbers, and is said by those who have grown them to be very productive. This fruit is used for culinary purposes in every stage of it's growth. When very young, it is good fried with butter; when half-grown, it is said to be excellent, either plainly boiled, and served up sliced on toasted bread, as asparagus; or stewed with rice sauce, for which purpose it is likewise sliced. It is often sent to table mashed like turnips: when full-grown, it is used for pies. It has been highly recommended to me by many persons who have grown it, while others speak of it as but little superior to the pompion.

(To be continued.)

EXTRACTS AND REMARKS

On Italian Agriculture, communicated for the American Farmer, by S. Hambleton, Esq. U. S. Navy.

Continued from page 163.

SOIL AND AGRICULTURE OF TUSCANY.

Tuscany comprises three regions entirely distinct. The Arno flowing through its smiling valley, forms in the midst of the mountains a hollow of which Florence occupies the centre, and which extends south as far as Cortona, and west to Pisa. Near the sea, this hollow, which is frequently very narrow, opens into a vast smooth plain, that has been left by the waters. The right bank of the Arno, is bordered by the high chain of the Apenines; the left bank extends to the sea, and to the frontiers of the states of the church. It presents an unequal, irregular surface, the soil of which has little fertility, and the air generally unwholesome; with eminences crowned by ruins of all ages.

The Appenine region comprises the two sixths of the whole extents of Tuscany; the rich valley of the Arno only one sixth; the three other sixths occupy the regions known by the name of the Maremma, which we have already described; and of which Surina may be considered the capital. Thus the fertile and cultivated part of Tuscany, which we have now to describe, is confined to one sixth of its extent. We have already exhibited to the traveller a sketch of the character and physiognomy of the Appenines, in which nothing appears to the eye but vallies ravaged by torrents, heaps of ruins, woody declivities and wild pastures. The same features serve in the Appenines of Tuscany, though somewhat milder; the summits of the hills being less elevated, the declivities not so steep, with fresher pastures and vallies better inhabited. But, like all the rest of the Appenines, the population is poor, fed on chesnuts, and supported by the profits of the work which they procure by emigrating to Florence, to Leghorn, the Val d'Arno, and the mines of the Isle of Elba. The course of the Arno above Florence, traverses the Val de Chiana; this valley resembles in every respect the Val d'Arno which extends from Florence to the sea. It will be sufficient therefore to describe the latter, in order to make the reader acquainted with the whole valley watered by that river.

In following the road to Pistoia and Lucca, as far as Pisa, we continue on the right bank of the arno, and follow the foot of the Appenines. Forests of olive trees cover the foot of these mountains and their foliage conceals an infinite number of little farm houses, which people all the base of these mountains. On the upper slope grow chesnuts, whose vigorous verdure contrasts with the pale tint of the olive, and forms a noble crown to this magnificent amphitheatre.

The road is bordered on each side by cottages scarce a hundred steps from each other; though built of brick, they have a justness of proportion and an elegance of form unknown in our climates. They consist only of a single pavilion, which has frequently only one door, and two windows, in front. These houses are always placed at some distance from the road, and are separated from it by a wall, breast-high, and a terrace a few feet in breadth. On the wall are commonly vases of antique form, from which raise aloes, flowers, or young orange trees. The house itself is entirely covered with vines, and in front, are swarms of young girls, dressed in white linen, with silk corsets, and straw hats, ornamented with flowers, and put sideways on their heads.

They are incessantly occupied in preparing the fine straw which is the treasure of this valley, and of which the Leghorn hats are made.

This manufacture is the source of the prosperity of the Val d'Arno; it brings three millions of livres* annually, which are divided solely among the women of this country, for the men do not meddle with this work in the least. Each girl purchases for a few sous the straw that she wants; tries to plait it as fine as possible, and sells the hats she makes herself and for her own profit; which in length of time forms her marriage portion. The father of a family has a right however to exact from the women of his house a certain quantity of work in his farm, which is performed by women from the mountains who are paid by the girls of the plain from the produce of their hats, to do the work in their place. In fact they gain thirty or forty sous a day, by plaiting their straw, while they can get a poor work-woman from the Appenines for eight or ten. They also assert that any rough labour would harden their fingers, and deprive them of the agility necessary for the fineness of their work.

These are the peasant girls of the Val d'Arno so much celebrated by travellers for their beauty, and whom Alfieri used to go and visit to study their language; they may truly be called Arcadian shepherdesses, for in fact they are not peasants, being never exposed to heat, toil or fatigue, and consequently always preserve their native charms.

It is said that two acres of ground are sufficient to supply all the straw used for the manufacture of hats in Tuscany. This straw is procured from a kind of unbearded wheat, cut before it is quite ripe, and which has been bleached by the sterility of the soil. The spot is chosen among the calcareous hills; it is never manured, and the seed is sown very thick.

These numerous habitations, so near each other, sufficiently show that the farms themselves are very limited, and that property is prodigiously divided in these vallies. Their extent, in fact, is from three to ten acres, they are situated around the house, and are divided into compartments by small canals and rows of trees. These are sometimes mulberry, but almost always poplar, the leaves of which serve as food for animals. Each being a vine-plant, the branches of which are twisted by the farmer in a thousand different directions.

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* *A livre is 20 cents, nearly.*

These compartments, arranged in long squares, are spacious enough to be ploughed with a plough without wheels, and two oxen---ten or twelve farmers have a pair of these animals among them, and they employ them successively to plough all the farms. These oxen come from the Rowan state and from the Maremmas; they are of the Hungarian breed, extremely well kept, and are covered with pieces of white linen, ornamented with a great deal of embroidery, and red fringe, almost every farmer keeps a neat elegant horse, which is harnessed to a little cart with two wheels, neatly made and painted red; it serves for carrying every thing about the farm, and especially to take the farmers to mass and to balls. On holidays all the roads are covered with hundreds of these little cars, flying in all directions, and conveying young women adorned with flowers and ribands.

The farmers of the Val d'Arno have not forage enough to keep cows; and therefore they only rear heifers, which they buy at three months old, and keep till they are eighteen, when they sell them to the butchers, and replace them with younger ones. The drivers bring these heifers to the fairs of the Val d'Arno from the pastures of the Maremmas.

This custom arises from the rotation of crops adopted in these vallies. There being no natural meadow, the leaves of hay, the remains of vegetables, and a little clover is the only food provided for the cattle. The rotation of crops is not irrevocably fixed, but is most commonly as follows:—

First year, Indian corn, haricos, Peas or other legumes, manured.
Second do. the same; corn.
Third do. winter beans.
Fourth do. same; corn.
Fifth do. same; clover, sown after the corn, cut in the spring and followed by *sorgo*.

That is to say, six crops in five years of which only one is for cattle.

The *sorgo* is a sort of large parsnip, which affords a coarse flower of which a bad soup and polenta* are made.

These different crops, though only once manured in five years, are nevertheless very fine. This is to be attributed to the nature of the soil, which is alluvial, deep and fertile; to its being cultivated with the most minute care; to the crops being happily interculated with each other, and finally to the extreme vicinity of the habitations; which furnish them that chemical manure, the action of which escapes our senses, but which experience forces us to admit. Thus this immense population lives on the produce of this soil so subdivided; but they live with severe economy, and never gather enough to lay up any thing in reserve, or to provide against a bad year; they are then assisted by the port of Leghorn, and the markets of the Romagna; and they find exchanges in the produce of their vines, their oil and their straw hats. But neither the natural fertility of this soil, nor its abundant productions constitute the happiness of its inhabitants; for the number of individuals among whom this total produce is to be divided, allows but a very small portion for the enjoyment of each.

In fact we have hitherto described a charming country, well watered, fertile and covered with perpetual vegetation, we have shown it divided into millions of enclosures, which like so many squares in a garden, give birth to a thousand varied productions:—while in front of all these enenclosures are elegant dwellings, mantled with vines and decorated with flowers. But on entering the houses, we find a total absence of all the conveniences of life, a table more than frugal, and a destitute appearance. None of these families are proprietors of the house they inhabit; but are farmers, who pay the proprietor the half of all the crops in kind.—The proprietors are fixed in the numerous towns in the fertile vallies of Tuscany; several of them possess as many as 100 farms; and a very great number have ten, twenty and thirty. The population is thus divided into two classes, who never mix with each other; the city proprietors, and the peasants who are not proprietors.—P. 580, &c. &c.

"This charming vale of the Arno, is perhaps the most delicious country on the earth. In no country is property more divided, in none has man added so much to nature. He has not left a single brook, but he has constructed thousands of canals: there is not a single green turf, not one of those natural meadows, in which the farmer in mowing them seems to receive a generous gift of the creation: there is not a single clump of wood—not a tree of which nature sowed the seed or directed the antique roots—all is planted and fashioned by man; his presence is felt every where, and he has multiplied his works to infinity. In the horizon alone we perceive that chain of mountains which he has abandoned, as it were, to Providence, and where he has neglected to extend his empire.—&c. &c. p. 584.

This spot (between Pisa and the sea) is remarkable for containing a herd of camels, which have been established there ever since the time of the crusades, and were brought over to this place by a grand Prior of Pisa, of the order of St. John. These animals are made to perform all the agricultural labours of this district. They furnish individuals also for all the showers of wild beasts in Europe, who can buy a camel here for the moderate sum of six or seven guineas.—P. 584.

THE APPENINES.

This country is too much ravaged by torrents to leave any space for the cultivation of corn; the climate also is too severe for the vine, the Indian corn and for vegetables;—they confine themselves therefore to the making of hay in all the little spots where grass will grow; and it forms, with beech leaves, the winter provision for the cattle. These consist of a few small horses for carriage, some sheep and goats; they also feed a considerable number of pigs, of an excellent quality, which are fattened with chesnuts and whey.

In summer, these animals wander over the neighbouring mountains, but are put in stables during the winter. With the goats' and sheeps' milk, they make little hard sour cheeses, which form a great part of the food of the inhabitants.

The wool of the sheep is wrought by the women in winter, and made into a stuff, the warp of which is thread, and with which the whole family is clothed.

Thus this country, without any cultivation, feeds its inhabitants with its spontaneous productions, that is to say, with its chesnuts: but then how plentifully and how vigorously do they grow on the declivities of these mountains! The fruit is larger and of a much superior quality to what is found in the north. It is eaten here under every form, but especially as a flat cake, which they call bread, but which was the only form of them which I thought bad. As to wheaten bread, it comes from Parma, and is a great luxury, only indulged in on important occasions. Besides chesnuts, this Appenine people have great quantities of pigeons and a considerable number of bees—and with this scanty means of subsistence, their population is numerous and the soil much divided. They are very industrious, and their first and principal way of making money is excessive economy; they make their own furniture and clothes, and they hardly want any thing more. —&c. p. 149.

On approaching a spot covered with rocks and thorns, I beheld a flock of more than 12000 goats, living always in the woods, and totally unacquainted with a roof or habitation. These animals only approach the shepherds to get the salt, which they give them twice a day when they milk them —p. 152.

CAMPAGNA.

The *Mal 'Aria* presents one of the most curious problems to be found in the natural history of any country; we have stated in another part of this "Guide," where we have given a general sketch of the soil and agriculture of Italy, that the country of the Mal'Aria is one of the three agricultural regions into which all Italy must be divided. For these reasons we have judged proper to insert in this place a general description of that remarkable tract of country which extends along the Mediterranean from Pisa to Terracina and comprehends all the plains which spread from the sea to the first chain of the Appenines.—&c. p. 376.

MAREMMA OF TUSCANY.

The Italian writers fix the depopulation of their country and the introduction of the Mal'Aria, about the time of the plague in the eleventh century; and since that period, the population has never been strong enough, they allege, to resist the influence of the *bad air*, which increases every year in proportion as population and agriculture diminish. Several attempts have been made to establish colonies in the Tuscan Maremma, which have all failed by the colonies being all cut off before the establishment gained any strength.

The soil of that tract has become sterile, and seems to consist of nothing but pure Argil, the whiteness of which is only altered by a mixture of the sulphur abounding in that region.

The country thus depopulated, having fallen into the hands of a few great proprietors, there remained nothing to be done but to take advantage of the spontaneous productions of the soil; to let the land run to grass, and to introduce a sort of wandering tribes who should dwell here only in the winter. During that season the Maremma is not unhealthy; and men as well as cattle may roam through the wilderness with impunity. It did not, however, suit the farmer of the interior country to leave his home and take up his abode in the Maremma. There came therefore necessarily to be interposed, between the proprietors of the land in the interior of those of the sea cost, a race of wandering shepherds, possessing nothing but their cattle, and emigrating with them, according to the seasons, from the hilly to the level country.

Under the conduct of these men four hundred thousand sheep, thirty thousand horses, and a vast number of cows and goats are annually reared, for the supply of the Val d'Arno and the other vales of Tuscany where no cattle are bred.

The consequences of this economy have been certainly to create a desert in the centre of Italy,

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NOTE BY A FRIEND—* *A sort of food made on the Appenines, of the meal of chesnuts, and in the plains, of the meal of Indian corn, simply boiled in water, when cool, cut in slices and recooked with the gravy of stewed meat and grated cheese. It is in fact the small Hominy of Maryland and Virginia.*

and to people it during half the year with savage creatures, who wander over these solitudes like Tartars, armed with long lances, and covered with a coarse cloth and untanned hides—&c. page 379.

APPENDIX

To the paper drawn by Sir John Sinclair, on the USES OF SALT FOR AGRICULTURAL PURPOSES; stating the Experiments, which are best calculated to ascertain the advantages of using Salt, for objects connected with Agriculture.

If an Experimental Farm had been fortunately established, under the sanction of public authority, and at the public expense, some years ago, when it was suggested, every use to which Salt is applicable in Agriculture, would, most probably, have been ascertained before this time; and Parliament would have had decisive evidence, on which to have proceeded in its recent inquiries. As it is, nothing remains to be done, but to recommend a number of experiments, to those who may be inclined to direct their attention to so important an object, to be tried as circumstances are favourable to the attempt. In this way, much may be effected, provided the experiments are conducted with accuracy, and reported to the Board of Agriculture, for the purpose of comparison and publicity.

1. *Experiments on Fallows.*

To sow in Autumn, from 30 to 40 bushels of foul Salt, or from 20 to 30 bushels of pure Salt, per acre, on strong soil proposed to be fallowed. The land to be ploughed before winter, and frequently stirred in spring and summer, so that the Salt may be thoroughly incorporated with the soil, before the seed is sown. In the course of this experiment, the following particulars to be ascertained: 1. Whether the Salt destroys weeds and insects;—2. Whether it makes the soil more friable, and less tough or adhesive;—3. Whether it produces an abundant crop of barley, or of wheat, free from rust or blight;—and, 4. What are the effects on the succeeding crop of clover, and the crops that follow it.

It would be very important, to compare the land thus treated, with an equal quantity of the same field, *manured with lime*, stating the expense of each, and their relative produce; and what would have been the expense, had the Salt been exempted from duty.*

2. *Experiments on Crops of Grain and Roots.*

To sow, on various crops, as wheat, barley, oats, beans, pease, potatoes, and turnips, as soon as the seed is covered with the earth, 16 bushels of foul Salt per statute acre, of from 10 to 12 bushels of pure Salt, *on the surface*, leaving it to be washed into the soil by rain, for the purpose of ascertaing the following particulars:—1. What are its effects upon the different crops on which the Salt is tried;—2. Whether it answers best on strong, or light soils;—3. Whether it destroys the wire-worm, grubs, the turnip fly, or the beetle, and other vermin destructive to crops;—4. Whether it prevents scabbiness on potatoes;—5. Whether salted turnips are less injured by the fly;—and, 6. What are its effects on the after crops.

A similar experiment may be tried, sowing the Salt about a fortnight before the seed, and mixing it with the soil by harrowing it in.

3. *Experiment for the Improvement of Waste Lands.*

To collect heath clods, and other refuse, when waste lands are first cultivated, and instead of burning them, to mix them with layers of Salt, so as to convert them into manure, and to try the effects of that manure with a crop of turnips or potatoes.

4. *Experiment with Salt, as a Remedy against the Smut.*

To ascertain, by comparison, whether immersing seed wheat in water, so impregnated with Salt, that an egg, will float in it, is not an effectual remedy against the smut, provided the seed be frequently stirred in the water, and the light grains skimmed off, and the seed afterwards dried, by having new slaked lime sifted upon it.

5. *Experiments for ascertaing the Effects of sowing Seed with Salt.*

To sow various sorts of seed,—in particular those of an oily quality, with different proportions of Salt, varying from equal quantities of Salt and seed, to one sixteenth of Salt, in order to try the effects resulting therefrom, whether in regard to improving the crop, or preserving the seed from the attacks of vermin in the ground.

6. *Experiments on Grass Lands.*

To try the effects of strewing, in autumn, sixteen bushels of foul Salt, or from 10 to 12 bushels of pure Salt per acre, on coarse herbage, or on peaty soils, also on grass lands covered with moss in spring; and to compare the effects with lands not so treated.

7. *Experiments on Crops of Clover.*

To make a compost of fine earth, with Salt, in the proportion of five, ten, or fifteen bushels per statute acre, (the preferable quantity not being yet ascertained,) and to strew it on the first crop of clover, in the months of March or April, or on the second crop, immediately after the first crop is cut, and to compare the effect of this compost, with parts of the same field, not treated in that manner.

8. *Experiments for ascertaining the Effects of Salting Hay.*

To mix Salt, at the rate of from 25 to 35 pounds weight of pure Salt, per ton of hay, when in the act of putting it together, particularly with the second crop of clover, in wet or damp seasons, in order to ascertain, whether it prevents hay from becoming mouldy, and whether it is not more acceptable to stock, than hay not salted. Also to apply Salt, or brine, to damaged hay when given to stock, and to ascertain whether, though refused by them in its original state, they do not eat it, greedily, when salted.

9. *Experiments to try the Effects of Salting Coarse or Moist Food.*

To sprinkle straw with brine, also to mix Salt with new oats, raw potatoes when first given to horses, or clover cut later than usual, and given to horses or cattle, in order to ascertain, whether coarse food, may not thus be rendered more palatable and nourishing, and moist food less injurious.

10. *Experiments with Stock.*

To try the effect of giving Salt to stock in the following proportions:

1. To horses per day, from three to four ounces.
2. To cows and breeding heifers per day, from three to four ounces.
3. To working oxen from three to four ounces.
4. To young cattle, from two to three ounces.
5. To calves, one ounce.
6. To sheep, at the rate of two ounces of Salt per week, divided into three portions.
7. To hogs in small quantities, occasionally mixed with their food.*

By some it is said that poultry do not thrive with Salt, though it is well known, that pigeons relish it much.

These experiments are recommended, for the purpose of ascertaining, by comparison with animals receiving no Salt, whether they thrive better, with the addition of Salt to their food;—whether they thrive better on coarse fare;—whether it improves the flavour of milk from cows fed with turnips;—whether stock in general become tamer and more domesticated;—and whether they are more free from disease,—as the bots in horses, and the rot, the sickness, or the scab in sheep†.

The Salt to be given to stock, to be either powdered and mixed with their food, or in that state put on stones, slates, or coarse cloths for them to lick,—or in large lumps so placed that the stock may have access to lick them.‡

11. *Experiments to ascertain whether Salt wil, prevent the Rust, or Blight in Wheat.*

To mix with the soil a fortnight before the wheat is sown, from 30 to 40 bushels of foul Salt, or from 20 to 30 bushels of pure Salt, for the purpose of ascertaining its effects on the succeeding crop of wheat; and in particular, whether it prevents the rust or blight. Also to ascertain, whether a crop of wheat, sown after turnips, raised with Salt mixed in the manure, is exempted from the rust.

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* *It is to be observed, that Salt, at the works, costs only sixpence per bushel, weighing 56lb.—and for sixpence, that it may be conveyed to any part of the United Kingdom. But the tax formerly amounted to 3000 per cent. of the prime cost.—See the letter by William Horne, Esq. of Liverpool, on the Repeal of the Duty on Salt, printed anno* 1816, *p.* 6.

* *It is said that in Ireland, when fattening their hogs, shey sprinkle a little Salt with every meal, by means of which they are found to fatten in half the period they would otherwise require.—Observations by John Marshall, Esq. on the Medical, as well as Dietetic Properties of common Salt, in the London Medical and Physical Journal, vol.* XXXIX. *No.* 231.

† *Some important information is given, of the great advantage derived from giving Salt to sheep, in considerable quantities, in the district of Crauf near Arles, in France.—See Annals of Agriculture, vol.* xxiv. *and Horne's letter on the Salt duties, p.* 11; *also vol.* i, *of the Memoirs of the Royal Academy of Sciences at Paris, where there is a paper entitled "Physical Observations on the effect of Salt in Fattening Cattle."*

‡ *The importance of Salt to stock, may be proved indirectly, from its great utility to the human species. The ancient laws of Holland, ordained men to be kept on bread alone, unmixed with salt, as the severest punishment that could be inflicted in that moist climate. The effect was horrible: these wretched criminals are said to have been devoured by worms, engendered in their own stomachs. The lower orders of people in the inland parts of Cornwall, suffer the greatest distress from the same cause, being obliged to eat their potatoes without any relish; and their children, who have salt still more rarely, become infested with worms.—A lady, who had a great antipathy to Salt, and had never taken any, nor even salted meat, was infested by worms from her earliest infancy, during her whole life. This proves the advantage to be derived from Salt to every animal liable to that disorder, and the reason why children are more apt to be troubled with worms, than grown up persons, is this, their taking less Salt with their food, and frequently none. This is a point, that ought to be particularly attended to at schools, and public seminaries, where great numbers of young people are collected. Where Salt cannot be had at a price within reach of the poor, salted meat, or fish, herrings in particular, should be recommended to them, more especially if they lived much on potatoes.*

There is reason, from analogy, to hope, that Salt may be of use in this respect. It is so great an enemy to corruption, or putridity, that the wood employed in Salt mines, to support the roof or sides of the mine, or the beams of wood in Salt warehouses, remain undecayed for ages.* It is natural, therefore, to suppose, that salt, judiciously applied, will likewise prevent the injury which plants receive from the fungus tribe, to which the disease called rust, is attributed.

12. *Experiments for Improving the Quality of Dung by mixing it with Salt.*

To ascertain, by comparative experiments, whether strewing Salt over dung, improves its quality, and the crops it produces, and what quantity is most beneficial.

13. *Experiments for converting the Roots and Stems of Vegetables into manure.*

To collect the roots and stems of weeds growing in the fields, or in hedges and hedge-rows to see what proportion of Salt it would require to convert the whole into a substance, capable of furnishing food for plants.

14. *Experiments for converting Peat into a Manure by means of Salt.*

To make a compost of peat and Salt, mixing it occasionally, to ascertain, what proportion of Salt is necessary, to convert peat into a manure for turnips and other crops.

15. *Experiments with Composts of Earth.*

To make a compost, with the usual quantity of lime, and another with Salt, at the rate of 15 or 20 bushels per acre, and to ascertain the difference in point of expense,—in regard to the apparent effect of the lime and the Salt, on the earth, —and on the ensuing and succeeding crops.

16. *Experiments to ascertain whether the Weight of Butter or Cheese is augmented, by the Salt used in manufacturing either of these Articles: and whether the Farmer is indemified by the additional Weight, for the expense of the Salt.*

It is said, that a farmer in Cheshire, (Mr. Weaver) who had mixed a pound of Salt with ten pounds of butter, found, that after working it in the usual manner, the salted butter only weighed 10 lb. 1 ounce; whereas, that ten pound of the butter, unsalted, had continued of the same weight. Mr. Weaver likewise asserts, that having rubbed in three pound of salt, into a cheese of 46 lb. weight, it was reduced, in six days to 43 lb.; whereas the same quantity of milk made into a cheese that weighed on a Monday, 46 lb. without Salt,—weighed on the Saturday following 43½ lbs. A proof that salt decreases the weight of cheese.

CONCLUSION.

On the whole, it is hoped, that every public spirited farmer, will try some of these experiments, according as his situation and other circumstances will admit of them: for the purpose of proving, that the attention which Parliament has bestowed, on this occasion, to the interest of the farmer, has not been misapplied.

On the Uses of Salt, in Gardens.

This is a subject well entitled to the attention of the Horticultural Societies of London and Edinburgh. In this place, it is only necessary to observe, that several respectable individuals, have ascertained the importance of Salt as a manure for fruit trees;† and it is said, that the vines and other fruits produced on the borders of the Rhone, are improved by the same application.*

Mr. Holinshead suggests, that every thing that is sown, or planted in a garden or hot-house, should have a portion of Salt sprinkled on the surface of the ground around it, immediately after the seed is covered with the earth.† The advantage derived from the application of Dutch ashes, so full of saline particles, to gardens in the Netherlands, is a full confirmation of this doctrine.

Mr. Beck, gardener, of *Chorley* in Lancashire, has constantly made use of Salt in his garden for upwards of thirty years, and he has invariably found it to exceed every other manure he could have used for that purpose, *particularly for onions*‡. He sowed the Salt immediately after the seed was covered in, at the rate of about sixteen bushels per acre, or five pounds ten ounces per pole or perch, or three ounces per square yard§.

Drilled carrots also grow well in a salted bed, the Salt being laid under the surface, in the centre of the intervals between the rows, and at some distance from the roots, that it may be dissolved before the fibres of the roots meet it‖.

N. B. In a recent communication from A. Bracebridge, Esq. of Walton on Thames, he states, that some years ago, the Clergyman of Holmes Chapel, who lived near the Salt Works, gave a favourite old mare, who was much broken winded, some spoilt hay, *that had been salted*, (at that time, Salt for agricultural purposes, was free of duty). The mare had nothing else to subsist on, but throve on that food so well, that she was fit to be put to work again next spring. This induced Mr. Bracebridge to drench some rotten sheep, night and morning, with strong brine, after which, he did not lose one;—they became fat, and the meat was as fine and good, as if the animals had never been affected.

As a supplement to the foregoing, we add the following note by Dr. Mease, annexed to the edition of the pamphlet by Samuel Parker, of London, on the uses of Salt in Agriculture, printed by Messrs. Careys' of Philadelphia.

Edit. Am. Farmer.

NOTE.

The utility of Salt for various agricultural purposes has long been known, and attended to in the United States.

1. As a manure it was early used for flax, as appears from some of Elliott's essays on husbandry, printed in Boston between 1745 and 1754: and Mr. Cadwalader Ford, in a paper on this subject addressed to the Massachusetts Agricultural Society, and published by that body*, bears testimony of its highly fertilizing effects on flax. The proportion which he advises to be used, is double the quantity of Salt to that of seed. He strewed the Salt at the time of sowing the seed. From three acres of flax salted he had 50 bushels of seed, and also an excellent crop of flax.

The publication of Mr. Ford's paper by Mr. Carey, caused the experiment to be repeated by Mr. Henry Hendrickson, of Cecil county, Maryland. He states* that on a poor piece of land he sowed one peck of flax seed, and one peck of Salt together, and that when the flax was about three inches high, he sowed another peck of Salt on it: He also sowed a piece of excellent land with flax, and although he had a good crop, yet the flax on the poor land "was a great deal better, and produced more seed than the flax on the rich land." A farmer in Delaware county, to whom I mentioned the fact of the utility of salt as a manure to flax, told me he had tried it, and that it was plainly seen to be of great benefit.

Mr. Deane† says that he found it, in 1786, to act as a beneficial manure to carrots, when placed "under the surface in the centres of the intervals between the rows, at some distance from the roots: that the Salt might have time to be dissolved before the fibrous roots should reach it." Upon onions and turnips it had no effect. The farmers on the brackish rivers on our coast, find that the salt grass growing on the water's edge, when ploughed in, acts as a very excellent manure for Indian corn; and on the Rariton particularly it is a general practice thus to employ it.‡

2. As a condiment to cattle, the utility of Salt is universally known to the American farmers, who are constantly in the practice of giving a portion of Salt to their cattle weekly. They find that the appetite is not only thereby greatly promoted, their digestion strengthened, and of course their disposition to fatting increased; but that their health is preserved by its use. During the late war with England, when the prices offered for domestic manufactures rendered the multiplication of Merino and other sheep an object with the American farmers, they were in the habit of placing large lumps of hard Rock-Salt in various parts of pasture fields, for the sheep to lick at pleasure. It is rational to believe that the very marked superiority in the health of every species of American cattle over those of Europe, may be ascribed to the general and free use of Salt. Many give a portion of Salt daily to their horses, as a preservative against worms of all kinds, as well as to preserve their digestive powers.

3. The practice of salting hay has been generally adopted for 30 years or more in Pennsylvania§. Hay thus treated (and clover hay particularly) may be put up with much less drying than when Salt is not used. Many farmers are in the excellent practice of mixing straw with hay, (as regularly as the hurry of stowing away will admit,) and of sprinkling the whole with Salt layer by layer. In this way both hay and straw are rendered more palatable to cattle. The quantity of fodder is moreover increased by this mixture of hay and straw. About one peck of Salt to the ton of hay is enough, but more will not be injurious.

4. Salt will even preserve fresh clover from rotting, although put up in stacks in time of rain. An extensive and bold experiment was made in this way by Mr. Luke Morris of Philadelphia, at his farm in Gloucester county, New Jersey, in the rainy summer of 1804. About twenty-two tons in two stacks were thus perfectly cured, and

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* *Sir Thomas Bernard's Tract on Salt, p.* 278.

† *See Hill on Fruit Trees;—also Sir Thomas Bernard's Tract, p.* 269.

* *See Horne's Letter, p.* 14.—*Annals of Agriculture, vol. xxiv. and Memoir of the Academy of Sciences in France, vol. i.*

† *Hints on Salt, as a Manure, by Hollinshead, second edit. p.* 28.

‡ *On that account, sea-weed is such an excellent manure for onions.—If the Salt is sown after the crop appears above ground, it is destroyed.*

§ *Hints on Salt as a Manure, by Hollinshead, p.* 28.

‖ *Husbandry of Scotland, second edit. vol. ii. App. p.* 182.

* *Carey's American Museum, vol* 1. *p.* 49.

* *Do. Do. vol.* 2, *p.* 176.

† *New England Farmer. Worcester,* 1790. *Art. Salt.*

‡ *On Salt as manure, see a pamphlet by Mr. Geo. Redd, of Virginia,* 1809, *and remarks on it by judge Peters, in Mem. Philad. Soc. for promoting agriculture, vol.* 2, *p.* 173.

§ *The good effect of Salt on the health of cattle, and its use in curing hay were mentioned in the Philad. edition of the Dom. Encycl. Articles* "cattle" *and* "hay."

eaten greedily during the winter by some thriving steers. The hay exhaled a saccharine odour, and the leaves and blossoms adhered to the stalk firmly. He put rather more than a bushel of Salt to the ton of hay.

The beneficial effects of salt air and salt marsh upon horses is proved by the fact, of broken-winded horses being greatly relieved, and sometimes cured by spending a season on the islands in the Delaware bay. Several decided cases of this nature have been communicated to me.

JAMES MEASE.

CHESNUT STREET, August 10th, 1819.

FROM THE N. Y. STATESMAN.

ON THE WILD INDIGO PLANT.

Messrs. Editors.—While we are anxiously copying the manipulations of European artists in our dye-houses, we are neglecting to use an indigenous plant, far more valuable than any thing of the kind contained, or used in Europe. Our blue dyers began with the ash vat, described by Berthollet, and others, and which Doctor Bancroft informs us, "is so costly, as to be chiefly employed to dye silk." If this were the only objection, it would in itself be sufficient to induce an alteration; but when in addition to this we know that the colour is not so bright, or so permanent, as when indigo is fermented by some vegetable basis, containing in itself the primitive colouring matter, we shall be much surprised that this mode of dyeing has been so long continued.

The plant used by Europeans, from time immemorial, to ferment their blue vats, has been the isatis, or woad, which is indigenous in England and other parts of Europe. It is not surprising, therefore, that it should be used there, as nothing better offered itself; but in the United States we have the wild indigo plant, growing abundantly every where, that possesses all the valuable fermentative properties of woad, with twenty times as much colouring matter, and giving a tint that for permanency and brilliancy is unrivalled.

"It is well known, according to Mr. Clarkson, that the African dyes are superior to those of any other part of the globe.

"The blue is so much more permanent and beautiful than that which is extracted from the same plant in other parts, that many have been led to doubt whether the African cloths brought into this country (England) were dyed with indigo or not. They apprehended that the colours in these, which became more beautiful upon washing, must have proceeded from another weed, or have been an extraction from other woods which are celebrated for dyeing there.—The matter, however, has been clearly ascertained; a gentleman procured two or three of the balls, which had just been prepared by the Africans for use: he brought them home, and upon examination found them to be the leaves of indigo rolled up in a very simple state."

Having noticed the above article in Doctor Bancroft's incomparable work on permanent colours, I was induced last fall to collect some of the plant, not with an intention of colouring with it, as I had no means of preparing it for that purpose; but to use it in the woad vats in place of swill from bran and madder, to assist their fermentations, which were weak, owing to the woad being of inferior quality. I gathered nearly a cart load, too late in the season to obtain it in maturity, and had it boiled, and used the liquor when wanting. The plants were too old to retain much of those succulent juices in which their value chiefly consist, yet it answered the intended purpose, for the liquors so long as I was enabled to supply them with it, worked much freer and more vigorous, than in the usual way; and although this experiment was not decisive, for want of a sufficient quantity, and from the plant being too old when gathered, yet I am convinced by the effect produced, that it may be used to great advantage.

As the indigofera is found every where in the United States, and in many places in great abundance, it would seem desirable that some experiments should be made on it, to test the superiority attributed to it, of which there appears to be but little room for doubts, for if this were established, it would become an object of great national importance, inasmuch as the colour made from it, would be superior to those obtained from Europe, and thereby give to the American fabrics a preference in a colour in which they are now decidedly deficient.

I apprehend the balls are made by simply placing the leaves together, face-ways, as they are gathered: that when a ball is made it ferments, and exudes sufficient moisture, to cause an adhesion of the mass; and that this process developes the colouring matter, so as to enable the vat liquor to extract it with sufficient facility. This is not the only mode of preparing the plant. The following extracts will prove there is considerable latitude, both in preparing and in working it afterwards.

Capt. G. Roberts, in the account of his voyages, mentions, "the indigo plant as growing wild at Bonavista; and that the natives prepare it, only by pounding the leaves of the shrub while green, in a wooden mortar, with a wooden pestle, and so reduce it to a kind of pulp, which they form into thick round cakes, or balls, and drying it, keep it till they have occasion to use it for dyeing their clothes. Mr. Mungo Park in the account of his travels in Africa, says—"that to dye cloth of a lasting blue colour, according to the practice of the negro women, the leaves of the indigo when fresh gathered, are pounded in a wooden mortar, and mixed in an earthen jar, with a strong ley of wood ashes, (chamber-ley being sometimes added) and the cloth is steeped in this mixture, and allowed to remain until it has acquired a proper shade.—When indigo is most plentiful, they collect the leaves and dry them in the sun, and when they wish to use them, they reduce a sufficient quantity to powder, and mix it with ley as before mentioned.

Mr. Marsden, in his history of Sumatra, says, "the indigo shrub (Yaroom) is always found in their plantations; but the natives, to dye with it, leave the stalk and branches for some days in water to soak, then boil it, and with their hands, work some quick lime among it, with the leaves of the pacoo sabba for fixing the colour. They then drain it off, and use it in a liquid state."

Other extracts might be added, confirming the good qualities of this plant, but I think enough has been made to convince the most incredulous reader, that it may be appropriated without much difficulty to purposes highly valuable.

The indigo made from the wild plant, is said to be of much better quality than that which is obtained from the cultivated, but that it does not contain so great a quantity of colouring matter.

The leaves should be gathered when the plant is in full blossom, which at three cents a pound, would be lucrative employment for country children, and if a sufficient supply of the dried leaves could be obtained at that price, it might be rendered, when manufactured ready for use, at less than the first cost of woad in England—By these means the American dyers could be supplied with a native article now considered as useless, equal to woad as a fermentative medium, containing twenty times as much colouring matter, more permanent than manufactured indigo, and giving a colour unequalled by any other plant or process.

HOPSON.

NATURAL HISTORY.

LETTERS FROM PARIS.

[*The following letter contain so many curious facts in natural history, &c. that we beg to request attention to its compressed intelligence.—LITERARY GAZETTE.*]

PARIS, April, 1822.

The annual public sitting of the Royal Academy of Sciences was lately held under the presidency of M. Gay Lussac. This meeting was not, perhaps, so remarkable as those of former years. The public of Paris must be amused, and it is difficult to avoid producing *ennui* in discoursing on natural philosophy and astronomy. Thus the Academy always experiences some embarrassment in selecting, from the lectures which have been delivered at the private meetings in the course of the year, that which may be best suited to the public meeting. M. Ampere addressed his hearers, on the subject of the electromagnetic experiments made within the last year by different natural philosophers; but judging from his lecture, which indeed was very brief, it does not appear that much addition has been made to M. Oersted's discovery. M. Delambre, one of the two perpetual secretaries of the Academy, read a long notice on the subject of the comet, which is now visible in the horizon. He stated that it could not be perceived without difficulty, and that it would soon be lost sight of. This is, I believe, the 25th comet which Pous the astronomer has been the first to discover, and thus he has been surnamed in France, *Le denicheur des comets.* A notice read by M. Girard, on the navigable canals for the supply of Paris, was a thing of merely local interest. M. Cuvier pronounced an historical eloge on Duhamel who died 1816. Duhamel was the first professor of Metallurgy in France; yet it was found necessary to send him to Germany, that he might perfect himself in that science, which, forty years ago, was a very new one. France is indebted to Professor Duhamel for some excellent modes of fining steel; M. Cuvier remarked, that since M. Duhamel had turned his attention to the working of mines, their produce had been more than doubled, and that France now exports metals in great quantities which were formerly imported from foreign countries.

A report of the proceedings of the Academy since last year, was delivered at the same meeting. The Academy of Sciences is, of all those which compose the Royal Institute, most numerous and active; and its reports always contain the results of many interesting transactions. The following are some curious facts of general interest, selected from the report of the present year. M. Da Trochet observing that the stems of plants always grow in the direction in which the seeds shoot, he placed some seed in holes bored at the bottom of a vase filled with damp earth, and suspended it to the ceiling of a room, thinking by this means to force the stems of the young roots to grow downwards; on the contrary, the roots descended through the holes, and the stems spouted through the earth to the top of the vase. M. Du Trochet set a missletoe seed on the point of a needle turning freely on a pivot, near which was placed a little plank; the root soon advanced in the direction of the plank, and reached it in five days, while the needle, on which it was placed, was not in the least moved. From this and similar facts, M. Du Trochet concludes that vegetation is governed by an internal principle, and not by the attraction of the bodies towards which it takes its direction. . . . . Since bees have been so attentively observed, we ought certainly to be acquainted with the natural history of these little animals, particularly when we consider the number of works which have been written on this subject. The Abbe de la Rocca who lived long in the Archipelago, has written, in French, three large volumes on the natural history of bees. The subject, indeed, seems to be inexhaustible. A Swiss family, named Huber, have undertaken to maintain permanent observations on bees, and to compose a new natural history of those animals. Though the head of this family be blind, he seems to have perceived many things which have escaped the notice of his predecessors. The Hubers have been for these twenty or thirty years, in the habit of making observations on bees, and it is probable that they will in due time succeed in discovering all the secrets of the hive. This family lately communicated to the Academy a work in which they attempt to overthrow the common opinion, that it is the pollen of flowers which furnishes bees with materials for wax; they have observed that bees produce wax only when they have extracted the honey or nectar of flowers; if bees gather the pollen it is merely for the nourishment of the larvæ; for this purpose they mix it with a little honey. The wax, when made, appears in little scales, which detach themselves from between the rings of the abdomen, where M. Latreille, the great dissector of insects, has discovered the receptacles of the wax, placed opposite the second stomach of the insect. M. Latreille seems also to have discovered the cause of the shrill noise, made by crickets and grasshoppers. He supposes it to proceed from a musical instrument composed of a sort of drum or box, filled with air, and laying on each side at the lower part of the abdomen. On this drum, case, or violin, as it may be called, membranes are stretched which answer the purpose of strings, while the hinder thighs of the animal serve as bows. If M. Latreille has really made this discovery, it must be confessed that crickets, &c. are very ingenious little musicians, though their performances are neither very varied nor very agreeable, particularly where a great number of these violin players are collected together. . . . . M. Savigny, another naturalist, has chosen Worms as the subject of his study; he has already discovered twenty-two species in the vicinity of Paris. The family of creeping animals appears more numerous than it was thought to be. M. Férusac has already made out three hundred species of land and river molusca, of the gasteropodal genus with lungs. M. Férusac likewise supposes he has discovered that the vegetation which anciently covered hills, was analogous to that which now covers plains, and that in former times the vegetation of our plains was analogous to the present vegetation of the torrid zone: such, at least, is the inference he draws from the remains of ancient vegetation which are now found on different soils. Hence he concludes that the temperature of the surface of the globe has considerably changed; and that there is a declination of vegetation, from heights to low places. The report stated that M. Férusac wished to draw similar conclusions from the wrecks of the animal kingdom; particularly from the remains of mammoths in the northern countries. But this hypothesis is destroyed by the circumstance that mammoths having wool and long hair are well able to endure cold. Thus there is no ground for supposing that the climate has changed in the countries where they lived. M. Chevreul, a chemist, who employs himself in *saponification*, or the manufacture of soap, has made an observation rather humbling to our pride; namely, that human fat and hog's fat produce nearly the same proportions of oxygen, carbon and hydrogen; so in this respect at least we are no way superior to animals who live on acorns!

FROM THE RHODE ISLAND AMERICAN.

James Sisson, Esq. who lives on Warren Neck, about three miles from the village of Warren, R. I. is well known to the public as an enterprising Agriculturist. He is always seeking improvement in what is most useful to his fellow-citizens, viz.: Orchards, the introduction of new kinds of grain, the best mode of cultivating his farm, &c. He imported from Bremen, in Nov. 1820, two pairs of the largest kind of Geese, supposed to be the largest in the world, weighing when fatted, 20 pounds, and it is confidently asserted, some weigh 30 pounds. At first he was rather discouraged, as they would not eat Indian corn, and the spring following they sat early and both geese reared but one to maturity. That one, however, this spring, brought off two litters, and the two old pairs each brought up a litter; he has now 17 young and 5 old ones, all perfectly white and healthy, and of full size. They feed and set as well as any of our common geese; the young come off healthy and strong, and yield about double the quantity of feathers. I was at his farm a few days since, and was highly gratified in viewing on the lawn directly in front of his house, two beautiful flock of snowy whiteness—(he has the common geese, feeding near them, and they resembled ducks in point of size)—and I have no hesitation in recommending to the farmers of New England that they introduce this valuable breed of poultry into their barn yards.—Mr. Sisson will dispose of a few pairs, if applied for soon, and the opportunity ought not to be neglected.

From the Easton Gazette, July 13.

REMARKABLE LONGEVITY IN MARYLAND.

It is not easy to imagine more beauty of landscape on a surface so nearly level, than is afforded by the combination of fertile lands and fine waters of many situations on the rivers of the *Eastern Shore* of the Chesapeake Bay. The land and waters run into, and intersect each other in every variety of form; and as you pass up these noble waters the jutting and protecting points and deep and spacious inlets are every moment delighting you with a new, and ever changing scenery of the softest and most reposing character of beauty, we ever recollect to have beheld or admired.—But this lovely country is said by those, who do not know it, to be unhealthy—and if unhealthy, certainly not desirable. To the feeble frame and languid eye of disease nothing is comfortable or beautiful.

Sometime since we were conversing with a preacher of the Gospel of the Methodist church on the healthiness of different sections of our country. He was a man of intelligence and of careful observation; was born and reared far to the north of us, where Hygeia, the loveliest Goddess of ancient fable, is supposed to have selected her abode. His professional duties had carried him to Canada, again brought him southward by that mode of easy visitation journeying, which would afford him the best opportunity of forming an intimate acquaintance with the manners, habits, condition and health, of every neighbourhood within the range of his travels.—He was of the class of circuit preachers whose residences are always transient, and who are thus most free from either local prejudices or partialities.—And he declared to us, were he obliged on oath to select the healthiest spot from the northern bounds of Canada to the southern bounds of Maryland, judging particularly from the vigorous frames and constitutions of the aged portion of the population, he would point out a neighbourhood in Talbot county, on the Eastern Shore of Maryland. A singular record in confirmation of this statement has just fallen into our hands the authenticity of which is indisputable. It may be justly remarked too, that tract of country within which those persons resided, is very small; from a third to one half of the designated five miles being covered by the tributary waters of the Choptank. It should also be stated, that the persons recorded were the venerable heads of families.—The same district embraced at the same time a number of as aged and hale servants.—We might probably challenge any as thinly populated tract of similar size in the United States to produce such a list.

Persons of 70 years and upwards, most of them hale and hearty, on the 27th day of March, 1808, and residing within fifty miles of the Oak in Talbot county, viz.

Peter Brown	98	Mary Rigby	86
Mary Harrington	71	William West	71
Eliza Rigby	78	John Seamore	70
Thomas Townsend	77	Rachael Seamore	74
Mary Shanahan	70	Hugh Orem	76
Perry Benson	75	William Hubbard	76
Nicholas Benson	70	Eliza Lurty	72
Arch. M'Neal	76	John Markland	74
Mary M'Neal	73	Edward Bromwell	70
John Robson	74	Mrs. Bromwell	70
Eliza Robson	71	Henry Banning	72
Foster Maynard	74	Mary Harris	79
Margaret Maynard	73	Mary Green	74
Alis Colston	84	James Jefferson	71
Phil. Rigby	76	Dorothea Blades	70

TO THE EDITOR OF THE AMERICAN FARMER.

August, 21*st*, *Seventh week of the drought of* 1822.

Mr. SKINNER,

The distresses produced by the drought are felt in nothing more severely, than in the effects on cattle, on farms where there are no streams of running water; and of all the cattle, the milch cows suffer most—any thing that will mitigate this evil, although it may not be perfectly effectual, will be useful. The only relief I know, and I find it a very great one, is, the turning cattle out at night instead of confining them in cow-pens or cattle yards.

A foreigner, who had been bred a herdsman, some years ago found fault with me for penning my milch cattle at all at nights during the summer season, and an Irish dairy woman, who resided with me a short time, was equally opposed to the same thing. The Herdsman asked me if I kenw the habits of cattle! My reply was, I believe I did, and undertook to describe them as follows, viz: At about 9 o'clock in the morning in summer they look for water, and then retire to the shade, where they remain, if unmolested. during the hot part of the day, and about 4 o'clock in the evening they water again and go forth into the field to graze, where they will continue feeding, if left to themselves, until about 10 o'clock at night, when they lie down and do not move again until a little before daylight when they resume their grazing, which they continue until about 9 o'clock, when they look for water. To this the Herdsman remarked, and with this knowledge, you persevere in penning your cattle, by which means you deprive them of more than an half of their best and favourite time for feeding, when the grass and ground are cool, and when the grass is filled with dew. The observation was irresistible—I abandoned the argument, but as happens in too many other cases, not the practice. I had been induced to think that the manuring the ground by keeping the cattle in cow pens was of more importance to me, than the additional quantity of milk. I lost sight of the injury my cattle sustained themselves, and I acknowledge, with no little contrition, that I never once thought of the barbarity of which I was guilty, in denying to the poor animals the enjoyment of one half of their feeding time at the most luxurious hours.

Want, which is always the result of laziness or bad management, obliged me this season, for the first time, to take the Herdsman's and dairy-maid's advice. My cattle were driven up to be milked night and morning, and immediately after milking they were turned out into the pasture again both in the morning and at night. In a week, notwithstanding the drought and my pastures were daily and hourly growing worse, I found the milk much increased, and in the second week, it was doubled in quantity. This is the result of experience, to which I was driven by necessity; and the knowledge of others directed me in the course. Let others avail themselves of the suggestion if they please.

Another inducement offered by the Dairy woman ought not to be omitted. She said in dry weather, the cows, by being penned together, and more especially if mixed together with the dry cattle, will in a very short time make your cowpen very dusty and filthy, and therefore it was an unfit place to milk in—the udders and the coats of the cows which are filled with dirt and dust, and although a pail of water might be carried to the pen to wash the udder, yet much dirt must fall into the milk from the coat of the cow at the time of milking, and the dust from the cattle in the pen was irremidiable. The plan was to have the milch cows driven up into a clean yard, milked, and turned out again directly.

As manure is a great object both to farmers and graziers, the better plan might be in summer, to drive your cattle into a shaded, littered pen or yard, convenient to water, where they might stay from 9 o'clock in the morning until 4 o'clock in the evening—this is a period of the twenty four hours in which the heat compels them to abstain from feeding, when if they are put into a well littered shady yard, the manure is saved and the cattle are not at all impeded in their feeding. AGRESTIS.

AGRICULTURAL.

The following observations of a Vermont Farmer, show that we should consult our real interest, as well as the finer feelings of our nature, by defending the innocent robin from the attacks of both boys and men. There are also other kinds of birds who prey on the insects which devour our crops, and whose industry would amply reward us for protecting them.—*Farmer's Journal.*

"I know of no method whatever to extirpate this larger species, which human ingenuity can devise. But Providence seems to have provided an antidote to this evil, in the *rebeaula*, or common Robin.—This innocent and useful bird preys with peculiar avidity upon this species of worm. This fact may be ascertained by visiting a nest of young robins in the vicinity of a corn field, when it will be perceived that they are fed lavishly upon this kind of worm. At other times, this bird feeds upon different species of worms and bugs which are found upon the surfuce of the ground, which services are of immense value and benefit to the farmer, and ought to recommend it to his peculiar care and patronage. But its innocence and utility are inadequate to protect it from the wanton cruelty of boys and sportsmen. What immense numbers of these, our benefactors are annually destroyed through mere wantonness and cruelty, while we are constantly hearing of the ravages of worms and bugs in the various departments of vegetation. Even whole corn fields have been laid waste the present season by this larger species of worm, which calamity might have been obviated by having spared and fostered the robin—The utility, in fact, of this invaluable bird, is so obvious, that even legislative interference is imperiously demanded to rescue it from the bloody fangs of the fowler. Other states have their protecting laws for the benefit of innocent and useful birds, and why should we be distanced in the sacred cause of humanity? The subject may appear trifling and novel at first, but a little reflection will convince any one that it is by no means unimportant."

* * *

York, (Pa.) August 13.

This section of the country has not experienced such a drought in the recollection of persons who have lived nearly a century. There has been no rain of any consequence since the 21st of February, the time of the flood, a period of nearly six months, and for the last two months Heaven has withheld its showers altogether,—like upon an African clime, the sun pours his sultry hours, parches the earth, dries up springs and streams. We hear daily of springs that were considered never-failing, disappearing, and that people like the thirsty throng of Israel, have to go miles in quest of water to sustain themselves.

Not a mill out of ten that can grind a grain, and those few that can, cannot supply the demand for flour.—Farmers have gone 20 miles to mill and were then generally disappointed in getting as much ground as would answer their immediate wants. A few weeks continuance of dry weather will cause a great scarcity, and probably impose a necessity of getting flour from Baltimore or else where.

The summer crops have almost totally failed, some fields will not yield a grain of corn, and the best of them not more than a few bushels to the acre. *Gazettee.*

Editorial Correspondence.

Loudon County, Va. August 20.

Dear Sir—I wish to write on a subject of great interest to all persons who can obtain an ear of new corn. I am led to think that as Barlow conceived it not a condescension to celebrate Hasty Pudding in pretty rhymes, it will not be derogatory to my humble character, to write a short formula for making one of the most delicious repasts,

"That ever blubber'd o'er the fire."

Take a few ears of new Indian corn, before the saccharine milk has entirely evaporated or as soon as it is sufficiently hard to rasp or file,—after rasping a sufficient quantity, not attempting to sift it, prepare the raspings in the same manner that you would hasty pudding (mush)—then with good rich milk, while the pudding is yet hot, make repeated applications to the tongue and jaws—and be assured, Sir, better eating you never enjoyed. I not only recommend it to you, but to all Epicures, and I think you and they will pronounce it good in the superlative degree. It is as far superior to the common hasty pudding as one dish can be to another.

Your true friend,
HARRIET HOMESPUN.

☞ To make a corn rasp, take a piece of an old tin bucket or coffee pot, and punch many holes therein, and then bend it in form of a half moon, and nail it to a board.

P. S. How would you like a description of a cheap, convenient, simple and useful washing machine?

H. P.

DISTEMPER IN DOGS.

Extract of a letter to the Editor, dated Warm Springs, N. C., 22d August 1822.

"I recollect having seen in your American Farmer, an account of several kind of Dogs, and supposing you had noticed the distemper or a fatal sickness which frequently affect young dogs, particularly the hound, Spaniel and pointer, I now send you for publication, what I consider an infallible cure, and worthy of being made public, viz:—Four grains of Tarpeths Mineral or Emetica Flavourn, and one grain Tartar Emetic, mixed with a small quantity of butter; these ingredients form the dose, and which are to be put down the throat of the dog; which can perhaps be best done by the aid of a funnel; the next day after the dose is given, you will find the animal greatly improved in health, and in most cases finally cured."

THE FARMER.

BALTIMORE, FRIDAY, SEPTEMBER, 13, 1822.

PRICES CURRENT.—CORRECTED WEEKLY.

Red wheat, $1 20 to 1 23—White do., $1 23 to 1 27—White corn, 77cts.—Yellow do., 73 to 75—Oats, 33 to 37 cts.—Rye, 55 to 58 cts.—Flour from the wagons, $6 87½ a $7—Shad, No 1. trimmed, $7 50 to $8—No. 2, $5 50 to $7—No. 1, untrimmed, $7—No. 2, do. $6—Herrngs, No. 1, $3 25 to 3 37—No. 2, $3 to 3 12—Beef, Northern mess per bbl. $10 to 10 25—Baltimore, prime do. $9 to $9 75—Hams, 10 to 12 cents—middlings, 6 to 8 cents—Cotton, West India, per lb. according to quality, 15 to 25 cents—New Orleans prime, 16 to 18 cents—Georgia, upland, do. 14 to 16 cents—Cheese, N. England, 12 to 15 cents, scarce—Coal, Virginia, per bushel, 25 to 30 cts.—English do., 40 cts.—Flax per lb. 10 to 10½ cents—Hops, fresh, per lb. 10 to 12 cents—Hogs' lard, per lb. 9 to 10 cents—Hides, E. Shore, per lb. 8 to 10 cents—Leather, soal, per lb. 24 to 25 cts.—Upper do., whole hide, $3 to $4 25—Salt, St. Ubes, per bushel, 50 cts.—Cadiz, do. 42 cts.—Liverpool, blown, 40 cts.—Ground do. 50—Turks' Island, 60—Wool, Merino, full blood, per lb. 35 to 40 cts.—Do. mixed, 28 to 30 cts.—Common country do., 20 to 30 cts.—Hay. per ton, $18 to $20—Straw, do. $12—Oats, country, pr. bushel, 20 cts—Beef, fresh, per lb. 6 to 10 cts.—Pork, do. per lb. 5 to 8 cents—Veal, per lb. 6 to 10—Mutton, per lb. 5 to 8—Lard, 12¼ cents—Butter, 25 to 37½—Cheese, per lb. 12 to 18¾—Eggs, per dozen, 16 cents—Potatoes, per bushel, 80 to $1—Wood, hickory, $5 to $5 50—Oak, do. $3 12½ to $3 75—Pine, do. $2 to $2 25.

Maryland Tobacco—Fine yellow, none—Good do., none——Fine red, and spangled,, $14 to $18,—Very little in market—Sales have been made this week for good Red, Patuxent from Benedict, $7 to $10—good seconds, $4 to $6—Common Tobacco, very plenty—no demand.

PUBLISHED BY JOHN S. SKINNER.
Printed by J. Robin

HORTICULTURE.

POMARIUM BRITANNICUM,

An Historical and Botanical account of Fruits, known in Great Britain, by Henry Philips.—Second Edition.

(Continued from page 194.)

GRAPE-VINE.—VITIS.

In Botany, a Genus of the Pentandria Monogynia Class. Natural Order, Hederaceæ.

The generic name is derived from *vincire*, to bind.

The cultivation of the vine appears to have attracted the attention of man from the earliest times of which we have any account. Every part of the Scripture, from the Flood to the crucifixion of our Saviour, mentions the vine as being held in the highest estimation. The book of Genesis informs us, that "Noah planted vineyards, and made wine." It is mentioned among the blessings of the promised land, "a land of wheat, and barley, and vines," &c.

The answer of the vine to the trees in Jotham's parable, shows in what high esteem men held this fruit:—

"And the vine said unto them, Should I leave my wine, which cheereth God and man, and go to be promoted over the trees?"

The patriarchs and prophets frequently represent in scripture the flourishing state of a nation, a tribe, or a family, under the emblem of a vine. "Thou hast brought a vine out of Egypt, thou hast cast out the heathen, and planted it; thou preparedst room before it, and didst cause it to take deep root, and it filled the land." Psalm lxxx.—Again the Psalmist mentions it, "Thy wife shall be as the fruitful vine, upon the walls of thine house."

The heathens, likewise, held the vine in the highest estimation. Bacchus was elevated to the rank of a god, for having taught men the use of the vine. As the god of vintage, of wine, and of drinkers, he is generally represented as crowned with the vine; and, according to Pliny, to have been the first who ever wore a crown,—

——— the grapy clusters spread
On his fair brows, and dangle on his head.
Ovid.

Bacchus was sometimes represented as an infant holding a cluster of grapes with a horn, and he has often been depicted as an old man, whose head was encircled with the vine, to teach us that wine taken immoderately, will enervate us, consume our health, and render us loquacious and childish, like old men.

Juno's crown was also made of the vine. The vine, with grapes, is still selected as a proper ornament in all bacchanalian devices.

Wine was chiefly used by the ancient Romans in the worship of their gods. Young men under thirty, and women all their lifetime, were forbidden to drink wine. Egnatius Maccennius killed his wife with a cudgel, having caught her drinking wine out of a tun, for which he was tried by Romulus, and acquitted of murder. Fabius Pictor, in his Annals, reports, that a Roman lady was starved to death by her own relations for opening a cupboard which contained the keys of the wine-cellar. Cato records, that the custom of kinsfolks kissing of women when they met, was to know by their breath if they had beed drinking wine, but these restrictions were removed when wine became more plentiful; and the use of it was then carried to such an excess, that even females would drink wine, and, by the aid of a vomit, throw it up again, in order to sharpen their appetites for supper.

Plato, who strictly restrains the use of wine, and severely censures the excess, says that "nothing more excellent or valuable than wine was ever granted by God to man:" the greatest philosophers, legislators, and physicians, give it due praise, when temperately taken.

Amphitryon is said by the Athenians to have been the first who diluted wine with water; and on this account the fable was invented of Bacchus having been struck by a thunderboldt, and, being all inflamed, was presently cast into the nymphs' bath, to be extinguished.

At what exact period the vine was first cultivated in England is uncertain; but I conclude it was as early as about the tenth year, A. D., as at that time the Romans had possession of great part of this island, and had introduced the luxuries of Italy wherever they settled. Augustus was then emperor, and it was common to send the sons of the English nobles to Rome to be educated; from this intercourse it seems unlikely that the culture of the vine should have been neglected at this time, though many authors are of opinion that the vine was not introduced into this country until about the year 280, when Probus, who greatly encouraged agricultural pursuits in all the provinces under Rome, was emperor.

Again, we are informed that the planting of vineyards in Italy had so much increased about A. D. 85, that agriculture was thereby neglected; on which account Domitian issued an edict prohibiting any new vineyards to be planted in Italy, and ordered at least one half of those in the provinces to be cut down. It therefore appears highly improbable that the vine should not have been planted in Britain previous to the year 280, when in 85 all the other Roman provinces were over-run with vineyards.

That we are indebted to the Romans for the first introduction of the vine, is generally allowed; although it is possible it might have been introduced at a much earlier period than I have stated, as the Phœnicians are said to have planted the vine in the isles of the Mediterranean sea, as well as in several parts of Europe and Africa; and as we have accounts of their trading to Britain for tin, they might have planted it on the English coast also: but this must remain a matter of conjecture, any further than it confirms the vine to have been originally brought from Palestine. In the book of Numbers we find that the men, whom Moses had sent to spy the Land of Canaan, returned with a bunch of grapes, which they bare between two, upon a staff. The Damascus grapes, at the present time; are ofted found to weigh upwards of twenty-five pounds the bunch. In the accounts of Ægidius Van Egmont, envoy from the States to the King of Naples, and John Heyman, professor of the oriental languages in the university of Leyden, who have published their observations of the present state of Asia Minor, it is mentioned that, in the town called Sidonijah, which is four hours' journey from Damascus, some of the grapes were as large as pigeons' eggs, and of a very exquisite taste. From these circumstances, we may fairly conclude that the vine is a native of Syria. That we do not hear more of the enormous clusters of grapes growing in the eastern parts, is owing to that country having been in the hands of the Saracens since the seventh century, when Abubeker over-run it; and these people being Mahomedans, a religion that prohibits the use of wine it is natural to suppose that the management and culture of the vine should be greatly neglected.

Although wine is not made in Egypt, vines are much cultivated, and the grapes have a delicious perfume: the greater part of those that are eaten there, are of that species, of which the fruit contains only a single seed.

The leaves of the vine are of great utility in the kitchens of Egypt: they serve to envelop large balls of hashed meat, one of the dishes most commonly presented at good tables. It is necessary that the leaves should be young: and they are frequently sold at a dearer rate than the grapes themselves. *(Sonnini's Travels in Egypt.)*

In this country, vine-leaves are used in roasting those delicious little birds called *wheatears*.

Pliny concludes, that the vine was very rare in Italy in the time of Numa, who ordered that no libations of wine should be made at funerals; and to encourage the pruning of vines, he prohibited the use of any wines, in sacrifices to the gods, that were cut from vines which had not been pruned.

Pliny says, "M. Varro writes, that Mezentius, the King of Tuscany, aided the Rutilians of Ardea, in their wars against the Latins, for no other hire but the wine and the vines which were in the territories of the Latins." He adds, "that wines did not come into much repute until 600 years after the foundation of Rome."

Julius Cæsar found vines growing in Languedoc and Provence; but other parts of Gaul were totally without vines at that time. Strabo remarks, that Languedoc and Provence produced the same fruit as Italy; but it was not until about the year 270, that the vine was planted in the northern parts of Gaul, and about the rivers Rhine, Maine, and Moselle; and in Hungary.

The varieties of the grape-vine are very numerous; and we have accounts of some of them growing to an extraordinary size, and producing such fruit as appears almost incredible to our northern conception of grapes.

Strabo, who lived in the reign of Augustus, testifies that the vines of Margiani, and in other places, were so big, that two men could scarcely compass them with their arms, and that they produced bunches of grapes two cubits, or a yard, in length. Columella states, that Seneca had a vine which produced him two thousand clusters of grapes in a year. Theophrastus mentions a vine that grew so large, that a statue of Jupiter, and the columns in Juno's temple, were made of it. At the present time, the great doors of the cathedral at Ravenna may be seen, which are made of vine-tree planks, some of them twelve feet long and fifteen inches broad.

At Ecoan, at the Duke of Montmorency's house, is a table of a large dimension, made of vine planks. Pliny states, that vines, in old times, were, on account of their size, ranked among trees. Valerianus Cornelius mentions a vine of one stock that encompassed and surrounded a good farm-house with the branches. Upon the coast of Barbary, vines are now growing of large dimensions, some of them being eight or nine feet in circumference; and in Persia there are some kinds of grapes so large, that a single one is a mouthful. From what we find in Huetins—Crete, Chios, and other islands in the Archipelago, afford bunches of grapes from ten to forty pounds' weight each. Chios, now Scio, has long been celebrated for its vineyards, and Virgil has immortalized its wines by his pen.

The ritual feast shall overflow with wine,
And Chios' richest nectar shall be thine:
On the warm hearth, in winter's chilling hour,
We'll sacrifice; at summer, in a bow'r—
Warton.

Pliny mentions a vine, in his time, that was 600 years old; and Miller states, that the vineyards in some parts of Italy hold good above three hundred years.

It is related, that Rhemnius Palæmon, who was a renowned Roman grammarian, bought a farm within ten miles of Rome, for which he gave 600,000 sesterces. By cultivation he so improved it, that the produce of his vines in one year sold for 400,000 sesterces. Pliny says, "many people ran to see the huge and mighty clusters of these grapes, which his idle neighbours attributed to his deep learning, while others accused him of using magic and the black art."

We have, at the present time, some remarkable vines in England; for since the introduction of stoves no country can rival us in the variety and perfection of this fruit, several kinds of which ripen well in the open air.

The vine, too, here her curling tendrils shoots,
Hangs out her clusters, glowing to the south,
And scarcely wishes for a warmer sky.

The Duke of Portland has upwards of a hundred kinds of grape-vines at his seat at Welbeck; and in the year 1781, his grace made a present to the Marquis of Rockingham of a bunch of grapes that grew in his vinery, which weighed nineteen pounds and a half: it was nineteen inches and a half in the greatest diameter, four feet and a half in circumference, and twenty-one inches and three quarters in length. It was conveyed to Wentworth House, a distance of twenty miles, by four labourers, who carried it suspended on a staff, in pairs, by turns.

The vine at Hampton-Court Palace, which was planted in the year 1769, has a stem of thirteen inches in girth, and a principal branch 114 feet in length, which in one year, produced two thousand and two hundred bunches of grapes, each weighing, on an average, a pound.

His late revered Majesty enjoyed the fruit of this vine half a century. Fruit was the only luxury in which he indulged himself, and that was cultivated in the Royal Gardens to the highest perfection, and served at table in great abundance.

Mr. Eden planted a vine of the black Hamburgh sort, at Valentine House, Essex, in the year 1758, which is the parent of the vine at Hampton Court, and has extended itself to upwards of 200 feet in length, being so productive, that it ripened two thousand bunches of grapes in the year 1819.

Speechly describes a vine, which was growing in the open air at Northalerton, in Yorkshire, in 1789, that had once covered a space containing 137 square yards; and it was judged, that, had it been permitted, it would have extended to three or four times the room. The circumference of the stem, a little above the ground, is, three feet eleven inches: it is supposed to have been planted 150 years.

In Jamaica, and some other of the West India islands, the vine produces two, and often three crops a year. Both Brown and Lunan observe, that grape-vines produce most abundantly in Jamaica, particularly the Muscadine, which ripens all its berries nearly at the same time, and has clusters of the fruit from eight to ten pounds weight; the pulp of which has been found less watery, and more fleshy, than the same fruit in the south of France, and yet the making of wine even for the consumption of the island has never been attempted.

There are several accounts of actual vineyards being in England in an early period of our history. Vineyards are noticed in the Doomsday Book, as also by Bede, as early as the commencement of the eighth century.

The isle of Ely was expressly denominated the *isle of vines* by the Normans. The Bishop of Ely, shortly after the Conquest, appears to have received at least three or four tons of wine annually, as tithes from the vines in his diocese; and in his leases he made frequent reservations of a certain quantity of wine by way of rent: many of these wines were little inferior to the French wines in sweetness. Few ancient monasteries were without a vineyard attached to them. Malmsbury mentions the county of Gloucester, as excelling every other part of the country, in his time, in the number and richness of its vineyards. In the reigns of Stephen and Henry the Third, we meet with accounts of vineyards. The first Earl of Salisbury planted a vineyard in his park adjoining Hatfield House, Hertfordshire, which was in existence when Charles the First was conveyed there a prisoner to the army.

Historians and antiquarians appear remiss, in not accounting for the total neglect of the British Vineyards; but we may conclude that, as our intercourse increased with the continent, it was found more advantageous to import wine than depend on the product of our own crop, which must have been an uncertain one, from the variableness of our climate. Again, the low price of foreign wines must have contributed much to the neglect of making it in England, as in the year 1342, according to Stow, the price of Gascon wines in London was fourpence, and that of Rhenish, sixpence per gallon; and, in 1339, the price of foreign wine was only twenty shillings per ton, for the best sort, and thirteen shillings and fourpence for the second quality, which was about three halfpence per dozen.

It is stated by several authors, that foreign wines were sold by apothecaries only, as a cordial, in the year 1300. I am of opinion, that it was Portugal wine only which the apothecaries sold, and not foreign wine in general, for about that time we find that the merchants of Gascoin were settled in London in great numbers; and that, in the year 1317, an order was made to this effect, "That merchants, who are not of the freedom of the city, are not to sell, by retail, wines or other wares, within the city or suburbs. Witness the King, at York, the eighth day of June."

The suppression of all the monastaries in England must also have contributed much towards the loss of our vineyards; and the present high duties on wine could not have been anticipated by our forefathers, when they neglected their vines.

The first duty on wines was one penny per ton, which was in the year 1272, when wine gaugers were first appointed at London and the principal sea-ports. The new gauge duty at London alone amounted to fifteen pounds sixteen shillings and sevenpence, which makes the quantity imported amount to 7,598 pipes. The principal customs for importation, at that period, seem to have been on wines chiefly French and Rhenish, as there is yet scarcely any mention of Spanish, or Portuguese, or Italian wine. *(Madox's History of the Exchequer.)*

In the year 1409, the duty on wine was three shillings per ton.

Grapes seem to have become rare about the year 1560. Strype, in his Life of Grindall, Bishop of London, (who was one of the earliest encouragers of botany in this kingdom) writes, that his grapes, at Fulham, "were esteemed of that value, and a fruit Queen Elizabeth stood so well affected to, and so early ripe, that the bishop used every year to send her Majesty a present of them.

The vintage is a season of mirth in all the wine countries, and seems to have been equally so in the earliest times. The prediction of Isaiah concerning Moab is particularly characteristic: "And gladness is taken away, and joy, out of the plentiful field; and in the vineyards there shall be no singing, neither shall there be any shouting: the treaders shall tread out no wine in their presses; I have made their vintage shouting to cease."

The Spaniard, during the vintage, throws off his stateliness and his cloak, and cries out to his servants, "Let us be merry, my companions; wisdom is fled out of the window."

The various wines made from the juice of the grape are so numerous, that to give a short description of each would be to write a voluminous work, and could only be interesting to those who are in the wine trade. Pliny says, there were eighty kinds of the best wines in his days.

The Grecians were renowned for their wines. Homer has celebrated several: among them, the kind called Maronean wine, which was made from grapes growing upon the coast of Africa; and also the Pramnian wine, which, according to Pliny's account, was made from one vineyard only in the neighbourhood of Smyrna, near to the temple of Cybele.

These wines were so rare and expensive in Rome, in the younger days of Lucullus, that only one draught was allowed at a repast, however sumptuous the feast was in other respects. Lucullus says, that "he never saw at his father's board Greek wines served up but once at a meal; but when he returned from Asia, he gave to the people a largess of more than 100,000 gallons of this wine; and Hortensius, at his death, left above 10,000 barrels full of Greek wines to his heir."

I have selected the following lines of a poet, who wrote in the fourth century, to show of what wines the Britons had knowledge at that early time.

Ye shall have rumney and malespine,
Both ypocrasse and vernege wyne,
Mountrese and wyne of Greek,
Both algrade and despice eke;
Antioche and Bastarde,
Pyment also, and garnarde,
Wyne of Greke and Muscadell,
Both clare, pyment, and Rochell.

Some of these liquors, as ypocrasse, pyment, and clare, were compounded of wine, honey, and spices.

At the installation feast of George Neville, Archbishop of York, and Chancellor of England, amongst other liquors is mentioned, "In ale, 30 tun; in wine, 100 tun; in ipocrasse, 1 pipe."

In the year 1311 we find Thomas Earl of Leicester debited by his cofferer, or pay-master, Thomas Leicester, amongst other charges, with £04. 17*s.* 6*d.* for 369 pipes of red wine and two pipes of white, which is about 5*s.* 7¾*d.* per pipe. *(Stow's Survey of London.)*

In the year 1322, when the sentence of banishment against the Spencers was removed, the elder Spencer's petition to the King, setting forth the damage he had sustained, amongst other things enumerates forty tun of wine and ten tun of cider. From these circumstances, we may fairly judge that wine was the principal beverage of the English nobility at that period.

At the present time, the consumption of wine in these dominions is immense, notwithstanding the excessive high duties laid on forrign wines; and in the London Docks there are eleven large vaults for housing of wines until the duties are paid on them: one of these vaults often contains near 30,000 pipes.

Portugal supplies us with both the red and the white port, which take their name from Oporto, from whence they are shipped. Lisbon, which is called after that city, and Bucellas, which is a wine made from the fruit of vines that have been brought from the Rhine, and planted in the neighbourhood of Lisbon, if not often renewed, degenerate, and become similar to the produce of Lisbon. No wine improves more by keeping than Bucellas, if good when bottled.

Port wine is imported in casks, containing 138 gallons, which is called a pipe, but often gauges two or four gallons over: upon this the duty must be paid, although the merchant makes no charge for the extra quantity.

France has been long famous for her vineyards, and even exported wine to Italy in the reign of Vespasian. Our traffic with Bordeaux for wine, commenced about the year 1172; and we now obtain from France a great variety of delicate wines, among which are the red and white hermitage, burgundy, claret, champaigne of several sorts, frontignac, muscadel, lunel, barsac, langon, vin de grave, &c. &c. The generality of these wines do not require long keeping, and without great care, burgundy and champaigne soon become ropy and spoiled. The most esteemed French wines are

The claret smooth,
The mellow tasted burgundy, and quick,
As is the wit it gives, the gay champaigne.

From Switzerland we procure neufchâtel, velteline, la cote, reiff, &c. &c.

The borders of the Rhine furnish us with a variety of Rhenish wines, the most esteemed of which is called hock, from Hockheim, the town where it is made. This wine cannot be kept too long, as it obtains both body and flavour, as well as colour, by age. Hock wine is given with the greatest advantage, in cases of the typhus fever. About one half of Germany can boast of having good vineyards, while the other half has none: all the wines of this country require long keeping.

The advantage of keeping particular wines, was well known to the Romans.

Est mihi nonum superantis annum,
Plenus Albani cadus.
Hor.

Phillis, this Alban cask is thine,
Mellow'd by summers more than thine.

Pliny mentions having met with wines in his time that were made in the consulship of Opimius, which was almost two hundred years before. This author says, "there was a wine made at Vienna which sold the dearest; it had," says he, "the taste of pitch, and it is reputed cooler than other wines, and was therefore given to allay fever."

The Hungarian wines, if not sent to us in quantities, are made up in quality, if we may judge by the price of tokay. At the sale of the Duke of Queensberry's wine, in 18—, the tokay sold for one hundred and fifty pounds per dozen, which is about a guinea a glass. The tokay made at Johanneski, in Poland, of the vintage of 1811, was sold on the spot for 4,000 floins the cask of 8 ohms, which is equal to twenty-seven shillings per gallon.

Spain furnishes us with sherry, paxeretta, mountain, tent, &c. Mr Swinburn mentions, in his account of Spain, that in plentiful seasons the vineyards are so productive, casks cannot be found to contain the wine; and that many vineyards remain ungathered, notwithstanding public notice being stuck at the church doors, that all who choose may gather, by paying a small acknowledgement. Those who are afflicted with bilious complaints should drink good sherry, in preference to all other wines, it being less likely to turn acid on the stomach.

The island of Madeira was planted with the vine from cuttings brought from Cyprus, by Prince Henry, son to John the First of Portugal, in the year 1420, when the island was first discovered; and it now affords about 30,000 pipes of wine annually. The Rhenish vine has also been planted in Madeira, and produces a very superior wine, known by the name of Cerciel Madeira: this island also affords us a sweet wine, called Malmsey Madeira, but the genuine Malmsey wine is the produce of Malvisia, and is now very rare. The ancients sometimes ripened particular wines, by placing them in the smoke above a fire, or in an upper part of their houses; and it is well known to the moderns, who are curious in their Madeira wines, how much they improve by being kept in a garret, instead of a vaulted cellar. Good West-India Madeira that has been exposed to the frost, as well as the heat of summer, will be found to have ripened, as well as by a voyage to the East Indies.

The Teneriffe wine, when about three years old, can hardly be known from Madeira; but as it gets older it becomes sweet and mellow, like Malaga. Formerly there was made at Teneriffe a great quantity of canary sack, which the French call Vin de Malvesia, and we, corruptly after them, Malmsey, from Malvesia, a town in the Morea, famous for luscious wines.

The luscious red wine called Lachryma Christi, is produced from vineyards on Mount Vesuvius.

The Cape of Good Hope has been planted with vines from the Rhine, Persia, and other countries; and they have so increased, that there is scarcely a cottage without a vineyard in all the colony. It is from the Cape that we obtain those rich wines called Constantia, both red and white, which are made on one farm only, and the quantity does not exceed sixty pipes of red and 100 of the white per annum. We also receive from thence large quantities of the wine called Cape, which will be good when the growers know their interest better, and attend more to the quality and less to the quantity. There is another objection to this wine, which must be remedied before Cape can be agreeable, *viz*: that the vines, instead of being staked, as in other wine countries, are suffered to trail on the ground: it is natural, therefore, to conclude that those berries next the earth will rot, and a few unsound grapes will give an unpleasant flavour to a large quantity of wine.

The moderate use of wine has never been condemned by physicians; and in so moist and changeable a climate as England, a more plentiful draught may be allowed than in warmer countries.

Sentius, when he was prætor of Rome, said he never had any wine of Chios in his house before the physician prescribed it for the palpitation of the heart, a complaint he laboured under, which is a convincing proof of it's having been used medicinally in those days. On the other hand, Androcides, in his letter to Alexander the Great, says, (to correct his intemperate drinking of wine,) "My good lord, remember when you take your wine, that you drink the very blood of the earth; hemlock, you know, Sir, is poison to man, even so is wine to hemlock."

That an excess of this reviving beverage is pernicious to the health, no one will attempt to deny, any more than he would to excuse repeated intoxication. Wine is not so much used in this age to debase man as it was in times past. Those liquors least intoxicating are now preferred; and the quality of the wines given at table is at present more attended to than the quantity; which has introduced cheerfulness and good sense around the decanters, in exchange for boisterous disputes. In an age that has advanced so far towards refinement, there can be no need to set up the alarm of poison, or condemn all the wine-merchants as murderers, as has lately become the fashion of some authors, which can answer no other purpose than that of alarming the timid, and bringing a respectable body of men into contempt. I am surprised that any person should make so severe an accusation as that of stating to the world that poisonous drugs are employed by the wine-merchants, without giving one instance to make good their assertions. About the year 1426, when Sir John Rainwell was lord-mayor of London, he having received an information of the mal-practices of the Lombard merchants in adulterating their wines, to the great prejudice of the health of his Majesty's subjects, caused one hundred and fifty butts of that pernicious liquor to be seized in divers parts of the city, the heads whereof being knocked out, the wine, or putrid matter, ran into the street channels, and emitted such a very noxious smell, that it infected the air to a great degree. It will be observed that this was an imposition practised by foreign merchants, and I do not recollect having met with any instance where an English wine-merchant has been detected in this infamous practice, or of the charge of mixing his wine with perry, as has been stated is often done, and thereby defrauding both the revenue and his customers. This latter charge can be refuted by the best of all possible reasons, *viz.*: it is against the interest of a wine-merchant so to do; for he has more difficulty in procuring superior wines than he has of obtaining ready sales at high prices, The best wines are always the first sold, and afford the largest profit, whereas inferior wines are rarely disposed of without a loss. I conclude it is generally known, that, at the present time, the duty and other incidental charges on foreign wines form the greater part of the price, and that the worst pipe of Port or Madeira pays as much duty as the best; it is therefore a most material part of the business of a wine-merchant to import the best wines from the countries with which he trades. When the vintage proves rather unfavourable, or his importations are deficient in flavour, he pursues a very different course to adulteration: he is obliged to procure the richest wines he can obtain of the same kind to mix with them. This is often done at a great expense, because he has not the means of disposing of inferior wines, even at any price. It is not an uncommon practice to add Burgundy or Hermitage to improve Port wine: this cannot be deemed adulteration.

Solomon, in his Proverbs, says, "Wisdom hath mingled her wine."

The fining of white wines is so simple a process, and attended with so little expense, that there can be no inducement to use poisonous drugs, as has been stated by a late publication to be a common practice. It is well known to every housekeeper, that isinglass dissolved in Hock or Rhenish wine will fine the most obstinate white wines. It is correctly stated, that there are persons who prepare finings for the wine-merchants at a cheap rate; but as this is publicly sold, any person has an opportunity to analyze it, and ascertain if it consists of poisonous drugs: indeed it would have been more honourable to have analyzed the wines of any suspected person, and to have exposed them to the public, were they guilty of so injuring the constitutions of their benefactors. A wine-merchant seldom does more himself to the finings of his wines than to give directions to his cellar-man: were he to use pernicious finings, how often should we hear of his being betrayed by his discharged servants!

For red wines, the whites of eggs, with sometimes a part of the shells pulverized, is the universal and only finings used. A few years back, when there was so great a demand for pale sherry, the wine-merchants discharged the colour with the assistance of a small quantity of new milk. The folly of this fashion was no sooner seen, than good brown sherries returned into favour. The Africans of old used to mitigate and allay the tartness of their wines with a kind of lime plaster, while the Greeks of the same day quickened their's with clay and marble powdered, or with sea water.

The Romans admired the flavour of pitch, which was often added to their wines; thus we find it has ever been the study of the wine-merchant to suit the taste of the times, but at no period has it been found necessary to add baneful drugs.

Grapes furnish the French with another article of commerce, almost equal in importance to their wines; namely, brandy. It is computed that their exportation in this liquor is not less than 50,000 pipes or pieces per ann. which, at the average of five shillings per gallon, produces them nearly two millions sterling annually.

The brandies imported into this country are principally from Bordeaux, Rochelle, and Cogniac; but they are very inferior to those made in in the neighbourhood of Nantes and Poicton, from whence private families in the city and suburbs of Paris supply themselves, and they are very careful to obtain the best quality of this spirit. All brandies are originally white, but by long keeping they naturally become a little stained by the cask; and to give this appearance of age to the brandies shipped for England, burnt sugar and other dyes are added to such an excess, as to destroy the natural flavour of the spirit.

Private families would do well to buy none but the best pale brandy, and the importation of bad brandies would soon cease.

The fruiterers of London have a considerable trade in preserved grapes, which are principally brought from Portugal in large earthen jars, closely cemented down: these grapes add considerably to the luxury of our winter desserts, as they are sold at moderate prices for so rare a fruit.

This art of preserving grapes was well known to the Romans. Columella gives a particular account of the manner they were preserved, both in his time, and in the time of his uncle Marcus Columella. He recommends them to be put into small jars that will only contain one bunch, and that the fruit should be quite dry, when the sun is on it, and after being cooled in the shade, to be suspended in the jars, and the vacua to be filled up with oat chaff, after all the dust has been blown from it. The jars must be well baked or burned, and not such as imbibe moisture: the tops of the jars must be covered over, and pitched, to keep out the air.

The process of drying grapes into raisins is usually performed, by tying two or three bunches together before they are cut from the vine, and dipping them into a hot lixivium of wood ashes, with a little olive oil in it: they then shrivel, and partly dry; and in a few days they are cut from the vine, and dried in the sun. We procure the finest raisins from Damascus. Sun raisins are brought from Spain, and are so called to distinguish them from those that are scalded, or dried, in ovens. Large quantities are also imported from Malaga, Calabria, Muscadine, Smyrna, &c.

The vinous latitude is said to extend between the 25th and 51st degree in the northern hemisphere,

It has been observed, that all the vineyards in Germany, beyond the 51st degree, are dubious. This leaves the southern coast of England within the latitude for vines; and I have often been surprised that the culture of them should have been so little attended to, where the shelter of the hills, and the soil, seem to offer so promising a situation.

There are several flourishing vineyards at this time in Somersetshire: the late Sir William Basset, in that county, annually made some hogsheads of wine, which was palatable and well bodied. The idea that we cannot make good wine from the juice of our own grapes is erroneous: I have tasted it quite equal to the Grave wines; and in some instances, when kept for eight or ten years, it has been drunk as Hock by the nicest judges. Grapes that are not perfectly ripe, and even sour, will make good wine, but it will require longer keeping.

If a sweet wine be preferred, raisins should be used with the grapes; for sugar and water (the common addition to our country wines) can never produce a good beverage.

The following observations on the economical uses to which the leaves and stalks of the vine may be applied, are taken from a letter in the Philosophical Magazine, No. 119, signed James Hall.

"From the experiments which I have made, I find that, on being dried, which should be done in the shade, and infused in a teapot, the leaves of the vine make an excellent substitute for tea. I have also found that, on being cut small, bruised, and put into a vat, or mashing-tub, and boiling water poured on them in the same way as is done with malt, the prunings of the vine produce liquor of a fine vinous quality, which, on being fermented, makes a very fine beverage, either strong or weak, as you please; and on being distilled, produces an excellent spirit of the nature of brandy. In the course of my experiments, I found that the fermented liquor from the prunings, particularly the tendrils, when allowed to pass the vinous, and to run into the acetous fermentation, makes uncommonly fine vinegar."

Vine-leaves, as well as the tendrils, have an astringent taste, and were formerly used in diarrhœas, hæmorrhages, and other disorders requiring refrigerant and styptic medicines. The juice or sap of the vine, called lachyrma, has been recommended in calculous disorders, and is said to be an excellent application to weak eyes and specks of the cornea. The tendrils of the vine were eaten as a pickle by the Romans.

The expressed juice of the unripe fruit is called verjuice, and is considered a very useful external remedy for bruises.

The wood of the vine, reduced to charcoal, is used by painters for drawing outlines, and is mentioned as good for tooth powder.

Although it forms no part of my plan in this work to enter upon the cultivation of trees, I cannot avoid giving a few remarks on a fruit of so much importance.

In the planting of vines, the first care should be to select cuttings of those kinds which are known to be good, and suitable to the situation and soil in which they are to be placed.

"The grafting of vines upon vines is not now in use," says Lord Bacon in his Natural History; and adds, "the ancients had it, and that three ways: the first was insition, which is the ordinary manner of grafting; the second was terebration through the middle of the stock, and putting in the scions there; and the third was pairing of two vines, that grow together, to the marrow, and binding them close."

Speechly, in his work on the vine, says, "The grafting of grapes is but little attended to, although of so much importance; as a bad vine may be improved without loss of time;" and he states, that he has had fine grapes from the same year's grafts, which, if permitted, will run from thirty to forty feet the first summer. He mentions a vine of the Syrian kind, in a hothouse at Welbeck, that produced sixteen different sorts of grapes from as many graftings.

Vines have ever been found to thrive best on the banks of rivers, or where their roots can draw moisture in abundance.

The scripture often makes the remark: "It was planted in a good soil by great waters, that it might bring forth branches, and that it might bring forth fruit, that it might be a goodly vine." (*Ezekiel*, c. xvii. v. 8.)

"Thy mother is like a vine in thy blood, planted by the waters: she was fruitful and full of branches, by reason of many waters." (*Ezekiel*, c. xix. v. 10.

It hath been stated, that the blood of animals, applied about the roots, greatly nourishes the vine; this must be owing to the quantity of saline particles which it contains.

Mr. Daws, of Slough, near Windsor, has made the experiment of painting one half of a wall black, that was covered with a vine, and leaving the other half in its common state. That part of the vine which covered the black wall, ripened the grapes earlier, and yielded about three times the weight of fruit that the other half produced.

Gentlemen, who prune their own vines, should observe, that the fruit is always produced upon the shoots of the same year, which are thrown out of the buds of the last year's shoots; and that it is not the old wood that yields grapes. It is best to prune vines as soon as the fruit is gathered, as the bearing shoots for the following year cannot then be mistaken; and it is recommended to shorten them, so as to leave but four eyes, as by leaving too many, the vine is exhausted, and yields but poor small fruit. The shoots just above the fourth eye are to be cut, and the cutting to be sloped or cut in such a manner, that the water discharging from the shoot may not run on the bud to injure it. About the beginning of May, all vines should be looked over, and the shoots from the old wood should be rubbed off; and if one eye produces two shoots, the weakest must be removed, Vines require frequent examining, after this time, to rub off all dangling shoots; and about the latter end of June, the ends of the bearing branches are to be nipped off, but those intended for the next year's fruit, may go a month longer before they are topped.

The blossoms of the vine have an agreeable odour: the ancients used to put them into their wine, to give it this fragrance.

The Romans reared their vines by fastening them to certain trees, as the poplar and the elm, &c., whence these trees were said to be married to the vines, which gave rise to that elegant and entertaining story of Ovid's Vertumnus and Pomona.

"If that fair elm," he cried, "alone should stand,
No grapes would glow with gold, and tempt the hand;
Or, if that vine without her elm should grow,
'Twould creep a poor neglected shrub below."

Pliny states that the vines in Italy would climb to the very top, and even out-top the highest poplars; on which account, the grape gatherers, in time of vintage, put a clause in the covenant of their bargains, when they were hired, that in case their foot should slip and their necks be broken, their masters should give orders for their funeral fire and tomb, at their own expense.

(To be continued.)

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Selections from late numbers of the London Farmers' Journal, received at the office of the American Farmer.

ON THE PRESENT STATE OF AGRICULTURE.

Kendal, May 16th, 1822.

Sir,

Several accounts have been published on the great depression in the value of the productions of the soil of this kingdom. The following tables will exhibit the subject in such a manner as will be manifest to the most common observer.—So great an alteration in the prices of the necessaries of life, continuing for so long a time together, deserve to be recorded in the *Journal of the times*.

Comparative statement of the London markets in provisions, hay, &c. at the following different periods; first, the months of February, 1814, and November, 1821.

	February, 1814.	November, 1821.	Decrease in value per cent.
	s. d. s. d.	s. d. s. d.	£.
Beef . .	5 0 to 7 0	2 4 to 3 10	48
Mutton	6 0 to 8 0	2 4 to 3 10	56
Lamb .	6 6 to 8 0	4 0 to 4 6	44
Veal . .	8 0 to 10 0	3 6 to 5 6	50
Pork . .	6 8 to 8 8	2 6 to 5 0	50
Bacon .	8 4 to 8 8	3 4 to 4 0	53
Potatoes	70 0 to 130 0	40 0 to 120 0	20
Hay . .	80 0 to 105 0	45 0 to 90 0	18
Clover,	100 0 to 147 0	50 0 te 110 0	31

From this Table it apperas that the price of Beef has decreased 48 per cent. or near one half. Mutton 56 per cent., that is more than one half.—Veal and Pork 50 per cent., or one half. Bacon 53 per cent. being more than one half; and in Potatoes, Hay, and Clover, also a considerable decrease; and the total average reduction on the above articles is upwards of £41 per cent. or nearly one half of the value. Can, or ought this state of things continue? I think not, though perhaps they may be borne a little longer.

Comparative state of London markets in the prices of Grain and Bread.

	February, 1813.	February, 1822.	Decrease per cent.
	s. s.	s. s.	£.
Wheat	90 to 135	30 to 72	54
Barley	50 to 70	16 to 27	64
Oats	26 to 56	13 to 27	51
Quartern Loaf	18½d.	8¼d.	56

From this table it appears that the average reduction in the prices of the above three kinds of Grain is more than 56 per cent.; and that the quantity of Grain which the farmer in 1813 got £100 for, he can now obtain only £44. So that it is evident to the most common capacity, he must sell above twice the quantity of grain now before he can raise the same sum he did in 1813. This I believe every farmer experiences, and I assert without fear of contradiction, that what rents have been paid for the last three years, have been paid out of tenants capital, and not out of the proceeds of the farm. Many people imagine that a reduction of rents would be sufficient to relieve the country. This is fallacious, for how is it possible there can be any reduction equal to this depreciation in value? From the above comparison it is clearly shown the whole rent is gone. I will state a case to illustrate the matter a little:—Suppose a farm of 100 acres, and 25 acres of it are sown with grain, say oats, which being a good crop produced eight quarters per acre (Westmoreland measure) being about one third more than the statute acre, or 200 quarters the whole 25 acres; this produce, according to average price in 1813, would amount to £410; but at the average price of 1822, it is only worth £200, hence there is a loss in value of £210 from the first price. Now we will suppose the rent of this farm at £3 per acre, which on 25 acres will amount to £75, so that we find there is a loss of £135 on 25 acres, over and above all the rent, betwixt the prices in 1818 and 1822. If we should allow the farmer the extravagant profit of £135 on 25 acres, in the former period, still the rent is entirely sunk. We may observe that this depression is not solely confined to grain; but from the first table we perceive that all the productions of the soil are affected nearly in the same proportion, whilst the tithes remain the same as in most prosperous times, (nay, many of the Clergy are become more oppressive,) and the poor rates have increased in an unparralleled degree. Such is the present alarming change, that if the Government do not devise more efficient measures of relief than they have done of late, the agriculture of the country must be ruined.

I am, Sir,
Your's obediently,
JOHN SWAINSTON.

PEELING AND BARKING FRUIT TREES.

This subject has been several times mentioned by query or otherwise, in our columns, and being very interesting in its nature, we take the opportunity that is afforded us by the receipt of Mr. Lyon's Treatise, to give some further information thereupon. In doing this, we purposely pass over all the previous reasoning in the treatise itself, as being wholly extraneous to the practical question; to enter into a controversy with the author, either on the physiology of plants, or on the agricultural application of his principles, is no part of our design. Our opinion on the whole of this introductory reasoning (though many parts of it are ingenious) is, that if the author had confined his work to the *cause and cure of canker*, it would have been an admirable practical essay.

There is a story told of an Indian in Pennsylvania, who had advanced so far into civilization, as to be taught to plant apple-trees; but when he was recommended to *prune* them, he shook his head, and said,—"God knew best how apple-trees should grow."—In this answer of the Indian, there is probably more good sense than some of our nurserymen and gardeners are well aware of; for the greater part of the management that is applied to our fruit trees, is rendered necessary by their being removed out of a state of nature: this departure from nature is two fold,—first, that the trees are either raised or planted on unsuitable soils; second, that they are trained to walls or trellises. The first of these branches into two points of very great importance, namely, that the standards for transplanting are raised in a manner totally different from that which nature would employ; and secondly, that standards so raised are often transplanted from a rich soil to a poor one. Now we entreat the very respectable body of men referred to above, to believe that we mean no censure either upon their judgment or practices; wall-fruit we must have, but training superinduces *pruning* for all that; and standards for planting must be reared near together, by reason of the value of the land; but this does not prove that the method is not injurious to the future growth of the trees; in fact, in many cases, trees so reared cannot afterwards swell and become healthy by any means.

We could, therefore, have wished that Mr. Lyon, instead of beginning a treatise (which is nothing if not practical,) with an excursive and doubtful argument, had commenced with the cause or causes, of want of health in fruit trees in general, in order to proceed to the best possible modes of remedying the evils when found to exist; for unless a departure from nature (in several ways,) be the origin of this, wby should fruit trees need restoring to health more than the oaks of the forest? Our rule with regard to forest trees, is to plant them small: who would take oaks of five feet long, with each a little bunch of small twigs at top, to plant for timber? Then how should apple trees, which are trained like whip sticks, be likely to swell properly in the trunk, after being grown three or four years in squares of a foot or eighteen inches, and all the lateral branches trimmed off? The truth is, that they often *bend* through natural weakness, and require propping and tying *straight* when planted. Where they stand in the nursery, they blow about with the wind, something like a crop of reed.

When such trees are planted from a moderate soil into a good one (if well chosen and carefully planted,) they swell away pretty well. But when planted from a moderate soil into poorer,—ill chosen and ill managed, they barely keep alive two or three years, but swell nothing in the trunk. This must include such a degree of *pining* as is hardly curable. In all cases, where trees are unhealthy, and mossy, the causes are herein perceived very clearly, for if the trunk does not swell sufficiently, it cannot be clean; the bark corrugates and becomes a dead colour, and bound; and the tree gets little wood, and bears poor small fruit. Now, if peeling be a relief at an advanced period, it would probably have been much more efficacious at an early one: Mr. Lyon says he has peeled trees at all ages with advantage, (that is, we suppose, trees which were *nursery raised*,) and it must be obvious that in an early stage, nothing more than *scraping*, so as to remove the outer dead skin, might in some cases be sufficient; but when the trees are more advanced, and the bark thick, hard and corrugated, the peeling must be deep, and done with cutting instruments.

To apply this reasoning, every one must take his trees as he finds them; but to those who are replanting, or beginning to plant, they may be more useful. On this division of the subject we present our readers with the following detached extracts from Mr..Lyon's Treatise:—

"The next cause (that is of *want of bearing*,) is constriction of the bark. This appears to be a more frequent disease, and more dangerous than is commonly imagined. It is indicated by the unequal growth of the tree, in all parts, and most commonly between the stock and graft: the choice of stocks, therefore, will be, such as grow most equally with the grafts to be put upon them; by the tree swelling more where the bark has been cut, or torn off by accident; by the canker, indurations, contractions, and rotting of the bark appearing in different parts of the tree; by the bark rending of its own accord; by the inner bark rending after the outer bark has been taken off, frequently in the very instant, and often not stopping at the peeled part, but running a great way above, bursting both inner and outer bark. This completely shows that the disease rests in the outer bark.

"In this case a longitudinal incision, or a partial peeling, may prove a cure; but it is more certain and complete to peel all round, from the surface of the earth, or rather a little below it, where the bark is soft and yielding, or as far as the bark is observed to rend and exfoliate by nature, but no farther. The whole trunk, and larger branches, as far as the bark will admit of division.

"It may perhaps be thought necessary I should inform at what age, that is, the earliest period, the trees should be peeled. It is difficult to fix a particular date for different species, varieties, soils, and situations; some species and varieties growing faster than others, and all growing faster or slower, according to the soil or situation. It must therefore be regulated by the symptoms of constriction before mentioned, or as soon as the bark will admit of division. As the tree advances in age, the bark thickens and hardens; the peeling therefore must be carried further up every year.

"The practice of grafting shows that a stricture takes place very early; for I believe it will seldom succeed where the graft is more than one year old; and as it is better preventing diseases than curing them, it may be proper to remove the outer bark before any of these symptoms appear; I have accordingly done so to a number of trees, (pear and apple,) of two years old, which have both produced fruit, and grown well to the wood.

"In very young trees, a mere scraping, or taking off the transverse bark will be sufficient, and have wonderful effect in promoting the growth of the wood; but ought not to be done, till the month of March, when the sap has begun to be in motion to form a new bark; because if it is done much earlier, the inmost bark and alburnum long exposed to severe weather, may be dried and contracted, so as to become impervious to the sap.

"I now make it a regular practice to peel, or take the transverse bark off every tree I have, at two years old, that is, the second year from the nursery; and find that it both promotes the growth of the tree, and brings it sooner into bearing."

ETOMOLOGY OF RYE GRASS; *the Agricultural common name of* LOLIUM.

BY THE EDITOR.

The name of this grass (so long almost exclusively sown in lays) has at length generally settled into *Rye-Grass*, a spelling which seems to denote that it is some way referred to the cultivated grain, Rye, to which it bears no affinity in Botany, nor any resemblance in nature. In old agricultural books, the name is spelled *Rey*, *Rie*, *Rye*, and *Ray*; and these spellings are often all in the same book. From the latter, some persons have supposed that the name was adopted in compliment to *Ray*, the celebrated Naturalist, who flourished from 1670 to 1700 or thereabouts, but of this I have not the shadow of proof.

I had occasion to observe several years ago, in answer to some observations of the late Dr. Richardson, on the neglect of single grasses, that the Rye-grass was undoubtedly first obtained by letting down some seeds from a hay-loft, before a a light wind; by which process, several times repeated, some clean heavy seeds were obtained, which could be commodiously sowed, and which certainly grew. Now, it is well known, that the *seive* by which this operation was probably performed, is called a *Ryeing* seive; or in divers places, a *Reying* (or *Reeing*) *Raying*, and *Rayling* seive. If it had happened that the verb *to Ree** had been at first written with a W, there would have been no difficulty in discovering the origin of *Wree*-grass; but the diversity of spelling, and the confusion with *Rye*, has caused all the obscurity. Most probably the first person who sowed it, was questioned as to how he procured the seed: "Oh! (says he) I *rayed* it." "Did you? (says his neighbour) then I'll *ray* some." Hence the name *Ray-grass;* or otherwise spelled and pronounced according to local custom; but the seeds being speedily thrashed, and travelling into distant places, their origin was left behind. Even in the place where first performed, the process would soon be forgotten, because as soon as thrashed seed could be had, it would be wholly laid aside as being tedious, and producing at last a sample not so clean and uniform.

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* *Ray (to* ray), *to agitate corn in a seive.*—Bailey's Dict.

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FROM THE N. Y. STATESMAN.

Extract of a letter from one of the editors, now in the country.

To pass from the confined air, and dust and heat of the city, so oppressive at this season of the year, into the pure and healthful atmosphere of the country—to inhale the river breeze, the invigorating air of the mountains, and the "sweet fragrance of the new-mown hay,"—is almost to experience a new existence. After a very pleasant journey across the mountains of Vermont, and through the most fertile and valuable parts of New-Hampshire, I have again entered the state of New York. The country through which I have passed looks every where delightful and prosperous, and the great interests of agriculture and manufactures appear to be rapidly advancing. The dry weather in the early part of the season, which for a time spread a gloom over the hopes of the husbandman, was succeeded by plentiful rains; the products of the earth revived; the early harvest has been every where abundant, while the latter is advancing to maturity with almost unequalled rapidity.

As evidence of the progress of manufactures, I will mention an establishment which I visited at Dover, N. H. which promises to rival, if not surpass, the celebrated manufactory at Waltham, Mass. The capital of the company is $500,000. They have a cotton factory which was put in operation during the war, which carries 2,500 spindles, employs 86 looms, 120 hands, and at which 10,000 yards of sheeting and shirting are manufactured and bleached per week.—During the last season the company erected a building of 80 by 54 feet, four stories, embracing a rolling and slitting mill, nail factory and machine. The basement and second story are devoted to the rolling and slitting mill—the construction of the rolling mill is on a new principle, having but one water wheel placed at the side of the platform. About 1,000 tons of iron are rolled and slit at this mill per year. The third story is used as the nail factory, and from 6 to 700 tons of iron per year are cut into nails in this factory. The fourth story is occupied as a machine shop, in which 40 hands are employed in making the various kinds of machinery for a new cotton manufactory now erecting on the same falls. The building of which I have been speaking is of brick, the foundation of granite, and the platform and race-ways of large flat stone.

The new cotton manufactory, building by the company the present season, is to be 154 by 43 feet, and will carry 4,000 spindles, employ from 120 to 130 looms and from 150 to 200 hands. It is calculated that this manufactory will produce about 20,000 yds. of cloth per week. There are six sites for erecting manufacturing establishments, fully equal to the one now under improvement, with a fall of 32 1-2 feet, and an abundant supply at all seasons of the year, which belong to the company; and they have already commenced blasting the ledge, for the purpose of erecting another of equal dimensions. These improvements will give activity to business, and be of lasting advantage to the town, which is destined to become the Manchester of New-Hampshire.

Those who have labored to impress upon the American people the importance of cultivating their own resources—of improving the advantages in their possession for becoming a great, a wealthy and powerful nation, able to sustain itself in war as well as peace, without recourse to other nations, cannot but rejoice at the march of improvement visible every where, and heartily wish success to industry and enterprise.

I have noticed numerous other manufacturing establishments less extensive, but in a flourishing condition. The establishment for making bar iron at Bennington, now undergoing repairs, promises important advantages to that section of country. There is an inexhaustible bed of excellent ore within a quarter of a mile of the furnace, with an abundant supply of wood for coal, immediately in the vicinity, and all the conveniences for carrying on an extensive manufacture.

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FROM THE MECHANIC S GAZETTE.

INSECTS THAT DESTROY SHEEP.

Messrs. Printers: The destruction of sheep, as published in your last paper, extracted from the Northampton Gazette, arises from an insect about as large as a honey bee.

There is a genus of insects called by naturalists *æstrus* or gad fly. In this and most other countries they are very injurious to neat cattle, horses, sheep, deer, and some other animals.—There are accordingly several species of this kind of insects, each of which has its peculiar habits and manners, according to the animals which it attacks. There is one which pierces the hides of our neat cattle, to deposit its eggs, which hatching into *larva* or maggots, feed upon the living animal and produce ulcers, sickness and death.

The *æstrus equi*, another species, deposits its eggs, on the hair of the horse, which are licked off by the animal and swallowed with its food.—The eggs hatch in the stomach, and are sometimes so numerous in the form of *larva* or worms, that they destroy the coats of the stomach and intestines, produce inflammation, and kill the animal. These are the insects which produce the botts in horses.

A third species æstrus ovis, the gad fly which annoys sheep, deposits its eggs in the nostrils of that animal, produces disease there, and frequently destroys them. The blind staggers in sheep is occasioned by this insect. The eggs are hatched into *larva* (grubs, or worms, or maggots,) which by their irritation excite inflammation and a running from the nose. When they are numerous the inflammation extends up the membranes of the nose into the *frontal sinus* of the brain, producing that vertigo or giddiness which causes the staggers, and occasions the death of the animal. The worms, when hatched from the eggs of fly, crawl up the nose; and in those sheep which have horns, there is a natural communication from the nostrils of the sheep into the cavity of the horns, and hence the grubs or maggots are found there, as the writer hereof has demonstrated by dissection.

In the season of the year when the sheep are attacked by this species of gad fly, their instinct naturally leads them to avoid their enemies.—Accordingly when these insects are heard buzzing about them, sheep frequently start and run, from no apparent cause, but actually to shun them. At such time, a fly of this kind will drive them from one place to another, and they are observed to hold their noses to the ground to shut up the avenues of approach to their enemy.

With these facts before us, we have only to watch the enemy, at the season of his arrival, give him no entrance, but keep him at bay for a few weeks, till this short race is run. We know of no better remedy than that of covering the nostrils of the sheep, with a list of gauzy substance, through which the animal can breathe, and keeping it in its place by some adhesive substance. This is the only method that has suggested itself upon considering the nature of the case, and if it can possibly be done, it is recommended to practical men, as the only plausible remedy.

FOR THE AMERICAN FARMER.

THE MORALS OF AGRICTLTURE.

September 14*th*, 1822.

MR. EDITOR,

I wish that some of your correspondents who have more leisure and more ability than myself, would take into consideration the subject on which I shall submit a few desultory remarks. If the morals of agriculture deserve not such attention on account of their importance, the subject is at least worth the notice, and is properly within the province of all authors of *addresses* to Agricultural Societies. Most of these gentlemen appear to be so much at a loss for subjects, that their addresses would not be badly designated by the title of "*Essays on things in general.*" I therefore recommend this subject to any person intending to prepare an annual address, unless he really should have something else to lay before his society and the public.

The Hindoos believe that whoever plants a tree, digs a well, and begets a child, is sure of admission into heaven. As ridiculous as this part of their religious creed may appear, it shews the wisdom of their priests and rulers by whom it was instilled—who thus brought the strongest motives to induce every individual to increase the productiveness, population, and wealth of his country. When our ancestors emigrated, they wisely left behind them all their elfs, fairies, witches, &c., and as it is impossible that we can long remain as we now are, free from popular superstitions, it would be a blessing to our posterity if we were to adopt the Hindoo tenet, so modified as to suit our different situations. We have no want of growing trees, nor of fresh water; and all experience proves that children will always be furnished as fast as the food is necessary for their support. Population is always precisely proportioned to the means of subsistence, and in an agricultural country, must increase with the improvement of the soil, and decrease with its exhaustion. The farmer who makes his land capable of producing annually 500 bushels of grain more than before his improvements commenced, increases permanently the population of his country by as many persons as his increased product will support. Another who spends his life in reducing the fertility of his soil to the same amount, diminishes population as much; and that diminution is more effectual and permanent, than if he had confined his exertions to cutting twenty throats of every successive generation.

To increase and multiply is a divine command—and perhaps is the only command which all persons strive to their utmost ability to obey. But though the usual means may be the most agreeable, I beseech your readers to believe that they are far from the mos effectual. It is true that no harvest can be reaped unless seeds are first sown—but every child knows that it is not the greatest number of grains planted which ensures the heaviest crop of corn, but the means afforded for the support of the plants, by the degree of fertility in the soil. Just so with population. Only let bread, or the means of obtaining bread be increased in any country, and its population will soon be equal to the increased supply of food. On the contrary, if bad farming or bad policy in the government, lessens the production of food, the inevitable consequence must be a diminished population These positions (which every sound political economist will sustain) shew what vast effects the labours of a single individual may have on the welfare of his country; and what beneficial effects might be produced, if it was believed (more especially by all law makers,) that he who directly or indirectly lessens the productiveness of the earth, is guilty of a sin far less pardonable than murder.

But seriously—this subject deserves to be reflected on by all: it will give additional gratification and encouragement to the improving farmer, and furnish an impressive lesson to him who is pursuing a contrary course. It would be visionary to expect that the public good alone, would induce any improvement by the sacrifice of private interest. Nor would it be desirable. A farmer can in no way do as much good for his country, as by pursuing precisely that course which is most profitable to himself. But though many attempts to increase the fertility of the soil are ill judged, yet there are means enough which are profitable; and there is no case in which the owner of a farm, can be most benefitted by its exhaustion. The many then who waver between the two opposite causes, could scarcely remain uninfluenced by the *moral* consideration, than on the course of farming which shall be pursued by each individual, the comfort, nay, even the existence of thousands of human beings would well depend.

For the purpose of illustration I will compare the course of two cultivators of my acquaintance, N——, inherited a farm and stock, capable of well supporting an industrious and economical man, but which if left to the sole management of an overseer, and treated according to the then usual practice, would not have paid the expense of cultivation many years. Fortunately he knew what course would most promote his interest.—For thirty years, he has not ceased striving to make two blades of grass, where only one grew before, and he has met with the success which his exertions deserved. He rejected all improvements (improperly so called) which promised not to return some clear profit on the capital invested, but considered no improvement too laborious or expensive, from which he could with certainty, derive the principal and interest of the first cost. He bought no land which he was not fully able to stock, or that would not yield more clear profit, on the purchase money, than he could have obtained from investing the sum in making additional improvements on the land already in his possession. At this time, by means of improvement, and purchase together, he makes crops six times greater than when he commenced. Though N——, has thus eminently promoted the public weal, it was without caring for it: his views were exclusively directed to his own private interest. He is obedient to the laws, and just and honest in all his dealings, because he knows that such is his best policy; but in no case does he allow his interest to yield to that of others, and perhaps never performed an act of real generosity in his life.

F——, is directly the reverse of N——, in disposition, character, and habits. Indolent, having no fondness for farming, his business has been entirely conducted by his overseers; and according to the usual maxims which very naturally govern such gentry, they have exhaused his land as fast as they could clear it. Nothing but the immense fortune which their employer possessed, prevented him from living as most landholders in lower Virginia have done, on all of his annual increase, and part of his capital. But F——, is moderate in his desires, and therefore not of expensive habits; and notwithstanding his bad management, his income has allowed him to continue purchasing land, until he owns almost as much as a German principality. By these means, his annual crops are not materially lessened, though every field is in its turn destroyed, and deserted for a new one. Though he does not obtain two *per cent.* from his capital, yet as less suffices for his support, he considers his wealth increasing as rapidly as the number of his acres. According to the usual calculation of profit, injury to the land is not taken into consideration. It is evident however, that the mode of cultivation pursued by F——, is merely abstracting the whole fertility of one field, in the shape of wheat and corn, and applying it to another in the shape of purchase money. What was said of the famous conqueror and destroyer, Attila, "that the grass ceased to grow where his horse placed his foot," applies with more truth to my friend F——. Notwithstanding his many virtues, he has to the the fullest extent which his means permitted, been the destroyer of grass, of grain, and consequently, of men. Famine marches after him, and will not commit the less havock because he is able to keep beyond her reach.

F——, is remarkable for his kindness and liberality to the poor. Besides frequent occasional acts of charity to others, he has long supported several families, who would perish without such aid. I know how to estimate the motives and according to them, to respect these two individuals. But their private virtues and vices, have nothing to do with my subject, except so far as the consequences of them affect the public good. F——, supports by his benevolence, twenty persons, and has destroyed the means of subsistence for 500, which in effect, is equal to starving, or preventing the existence of as many. N——, has given nothing in charity, but has given in the *wages of labour* more than F——'s wages and alms together: he has increased the production of the earth enough for food for 500 persons, and therefore he has increased population to that amount, though not at all by the Hindoo mode, as he has no children. It is very true that these people must work to obtain N——'s increased product; and so much the better. His improvements will not die with him, nor will the corporeal powers of this labouring population which will continue to earn and consume it. The country is not benefitted only by having its population increased by 500 persons: if they were all drones, they would rather be an evil. But the people who eat N——'s, corn, are field labourers, mechanics, manufacturers, sailors, and merchants, all of whom are continually increasing the national wealth by their industry, as well as its strength, by their numbers. F——'s charity has served not only to support several families, but has doubled their number, by the births which have taken place since they partook of his bounty. After his death, they must still be supported by others, or starve. They are not able to add any thing by their labour to the public stock, and though the children will hereafter be able, their present situation is the worst of all schools to acquire habits of industry. Were all our land holders like N——, the wealth and population of the state would quickly be doubled. Were all like F——, with all his virtues, wealth and population would rapidly diminish, until the country became a desert. Thousands are pursuing the ruinous course of the latter: very few cultivate so as alike to increase the national resources and their own.

My opinion on this subject, taught me to expect but little increase in the population of Virginia, and not to be disappointed in the report of the last census, which shows a gain of but 10 per cent. in the last ten years. But for the recently awakened spirit of agricultural improvement, (the impulse to which, we owe principally to the author of Arator,) I think that the tide-water district would have suffered a considerable diminution. As much vacant land as this district contains, there is but little uncultivated, which (until enriched) will yield any clear profit. Therefore, Eastern Virginia, in its present state, is fully populated, and no increase can be expected, except from the improvements of the soil, and the consequent increased means of subsistence. We export provisions it is true; this may at first seem to indicate a surplus of the means for subsistence, and a fund for additional population. But such a conclusion would be incorrect. Our surplus food is exchanged for clothing and other commodities, which in fact, or from custom, are as necessary as sufficient food. Our only consolation is, that our excess of population emigrates to the West, instead of starving, as in most fully populated countries.

If private individuals can exert so much influence on the population and strength of their country, how much more extensive must be that of the government. A member of the legislature, by a single vote, may retard population more than by destroying the productiveness of all the land in his possession. A single bad law, which cramps ingenuity and industry, or destroys their honest gains, or what is worse, puts them into other's pockets, causes more poverty and depopulation than a thousand exhausting cultivators. Many are the sins of this description, which have been committed by our legislatures, both state and federal; it is enough to name as examples, the protecting duty policy, banking, and laws for the compulsory support of the poor. The last, though now the least of such evils, will hereafter become the heaviest. Poor laws impose taxes and penalties on honest industry, and offer rewards for idleness, extravagance, drunkenness, and debauchery—and their inevitable consequence will be to increase those vices, until their support shall have absorbed the whole income of the industry of the nation. England has already drawn near to that dreadful situation, and with her example before us, we are pursuing the some course, to the end.

APPOMATTOX.

A VALUABLE AND WONDERFUL CALF.

A calf only seven months old on the 16th of last month, the property of Nathan Cook, of Fayette, Seneca county, is stated to have given for the last month from 1½ to 2 pints of milk every day; and has a bag and teats of a handsome size. The usual quantity of cream rises on the milk as on milk from cows. The calf is but common sized for the age, and Mr. C. is obliged to have it milked regularly to prevent injury.

☞ At a meeting of Farmers, held at Norristown on the 9th instant, Jonathan Roberts, Levi Pawling, George Sheaff, George Holstein, and Richard B. Jones, Esquires, were constituted a Committee to co-operate with such committees as shall have been appointed by Philadelphia, Bucks, Chester and Delaware Counties, and to meet on Saturday, the 19th of October, at the sign of the Buck, near the 8th mile stone on the Lancaster road, in order to organize an Association of *practical* farmers, for the advancement of Agriculture and Rural Economy.

Editorial Correspondence.

Charles City County, 5th Aug. 1822.

I am very desirous of obtaining information on the subject of expressing the oil from the seed of the Palma Christi—Our medical gentlemen give a decided preference to the cold pressed oil, over that obtained by boiling—and you would confer a favor on me by communicating through your paper, or otherwise, any information which you may possess on the subject; or may obtain by means of any of your correspondents.

Bethlehem, Georgia, 30th Aug. 1822.

Corn and cotton crops of the upper counties of Georgia, good. Of the wheat crop, almost an entire failure. Certainly not a sufficient quantity of good wheat in the State for sowing.

HEMP.

Extract dated Detroit, 24th Aug. 1822.

"Perhaps in no part of the Union can be found so much good hemp land within the compass of a hundred miles square, as can be found in this territory, and we can think of no better agricultural speculation for a monied man to embrace, than that of erecting a hemp breaker and cleaner, employing fifteen or twenty men, and commencing the raising of Hemp on a large scale within a few miles of this place. Good land for such a project can be obtained for 10 shillings per acre, and labourers can be had for 8 or 10 dollars per month. The article of hemp commands a good price at Buffalo; to which place it could be transported for a mere trifle. But there is little doubt, that it would far increase the value of the speculation, were factories for the manufacture of Hemp to be erected on the fine streams which wash the banks of the hemp land. These streams are very numerous, and afford the most ample facilities for any kind of machinery.

There is nothing like agricultural enterprize yet to be found in this country, although we have a few tolerably good farmers—none very good. Your's respectfully."

The following recipe comes from the hands of a lady, eminent for the neat and judicious management of all her household concerns; we can say from happy experience, that tables spread under her superintendance, are always inviting, as well for the variety of good things, as for the taste with which they are displayed.

Edit. Am. Farmer.

TO PRESERVE TOMATOES THROUGH THE WINTER.

Peel the Tomatoes, cut them small, and stew them without water, their own juice being sufficient: season them with salt, pepper, grated ginger, garlic pounded fine, to your taste—when cool, put them up in bottles and cork them so as to exclude the air—look at them frequently, if you observe an effervescence of mould, or a disposition to foment—heat them over a slow fire—they must be done in an earthen pan, or the fine red colour will not be so well preserved—they require to be kept on the fire some considerable time, until some are wasted, or they will not keep—when the weather is cool there will be no further trouble with them.

THE FARMER.

BALTIMORE, FRIDAY, SEPTEMBER, 20, 1822.

☞ The 1st, 2nd and 3rd Vols. of the Farmer, may now be had bound.

☞ The proceedings of the Pittsburgh Agricultural Society, have just fallen under our notice—they shall be published in our next number.

☞ THE EDITOR HAS FOR SALE—A bull of the North Devon breed, two years old last spring—well grown and very beautiful. He is out of one of the cows, and was got by the bull sent a present to this Country by Mr. Coke the celebrated English farmer, who says of this breed, "I venture to give it as my opinion that we have no cattle to be compared to them in the United Kingdom, for purity of blood, for aptitude to feed, for hardiness, for work and for the richness of their milk, as I have repeatedly found by a variety of experiments upon my own farms and elsewhere.—That they may answer in America as well as they are now universally acknowledged in England I most cordially hope, and my wishes will then be gratified."

To save trouble the price of this Bull is $200—by means of a ring in his nose, which all bulls ought to have, he may be managed by any boy, and may be safely transported any where by water.

☞ The Editor has pigs now on hand of improved blood—which he can recommend for Breeders—to persons wishing to get a good stock of hogs—many are already bespoken, and the rule is—"first come first served." They will be put into a suitable pen, and sent with provisions for the voyage to any port for $15 the pair, or three pigs for $20.

PRICES CURRENT.—CORRECTED WEEKLY.

Red wheat, $1 25 to 1 27½—White do., $1 27 to 1 30—White corn, 75 to 76 cts.—Yellow do., 70—Oats, 35 to 37 cts.—Rye, 60 to 63 cts.—Flour from the wagons, $6 50—Shad, No. 1. trimmed, $7 50 to $8—No. 2, $5 50 to $7—No. 1, untrimmed, $7—No. 2, do. $6—Herrngs, No. 1, $3 25 to 3 37—No. 2, $3 to 3 12—Beef, Northern mess per bbl. $10 to 10 25—Baltimore, prime do. $9 to $9 75—Hams, 12 to 15 cts.—middlings, 10 to 11 cents—Cotton, West India, per lb. according to quality, 15 to 25 cents—New Orleans prime, 16 to 18 cents—Georgia, upland, do. 14 to 16 cents—Cheese, N. England, 12 to 15 cents, scarce—Coal, Virginia, per bushel, 25 to 30 cts.—English do., 40 cts.—Flax per lb. 10 to 10½ cents—Hops, fresh, per lb. 10 to 12 cents—Hogs' lard, per lb. 9 to 10 cents—Hides, E. Shore, per lb. 8 to 10 cents—Leather, soal, per lb. 24 to 25 cts.—Upper do., whole hide, $3 to $4 25—Salt, St. Ubes, per bushel, 50 cts.—Cadiz, do. 42 cts.—Liverpool, blown, 40 cts.—Ground do. 50—Turks' Island, 60—Wool, Merino, full blood, per lb. 35 to 40 cts.—Do. mixed, 28 to 30 cts.—Common country do., 20 to 30 cts.—Hay, per ton, $18 to $20—Straw, do. $12—Oats, country, pr. bushel, 20 cts—Beef, fresh, per lb. 6 to 10 cts.—Pork, do. per lb. 5 to 8 cents—Veal, per lb. 6 to 10—Mutton, per lb. 5 to 8—Lard, 12¼ cents—Butter, 37½ to 50—Cheese, per lb. 12 to 18¾—Eggs, per dozen, 18 cents—Potatoes, per bushel, 80 to $1—Wood, hickory, $5 to $5 50—Oak, do. $3 12½ to $3 75—Pine, do. $2 to $2 25.

TOBACCO—No sales, very dull.

AGRICULTURE.

ALLEGHENY COUNTY AGRICULTURAL

EXHIBITION AND FAIR.

In conformity with an Act of the Legislature of Pennsylvania, "For the promotion of *Agriculture and Domestic Manufactures*," the first Annual Meeting of the Society for the promotion of Agriculture and Domestic Manufactures in and for the County of Allegheny, will be held on the last MONDAY of *October* next, at the Town of *Allegheny*, opposite Pittsburgh, when the following rewards will be distributed.

NEAT CATTLE.

For the best bull, not more than five years nor less than two years old	$10
best bull calf under two years -	5
best milch cow - - - -	10
best heifer, from one to three years old, with or without a calf	6
best yoke of broke oxen - -	10
second best yoke of broke oxen -	8

HORSES.

For the best stallion - - - -	10
best brood mare - - -	10
best colt under three years old -	5

SWINE.

For the best boar not more than two years old nor under six months -	5
best breeding sow - - -	5
best pigs not less than four in number, and of the same litter -	3

SHEEP.

For the best merino ram - - -	5
best merino ewes not less than three in number - - -	5
best native ram - - - -	3
best native ewes three in number -	3

DOMESTIC MANUFACTURES.

For the best piece of linen shirting not less than thirty yards long nor less than one yard wide	10
best flannel twenty yards long and not less than one yard wide	5
best woollen cloth not less than twenty yards long nor less than 3-4 wide - - -	10
next best woollen cloth	5
best pair of socks and stockings knit of linen thread - -	5
best woollen socks and stockings knit	5
best lindsey thirty yards long and one yard wide - -	5
best woollen carpeting not less than twenty five yards long -	10
best pair of blankets - -	5
best bonnet made of straw or grass	5
best butter not less than ten pounds in quantity nor less than three months old - - -	3
best cheese not less than twenty pounds - - - -	3

CROPS.

For the best average crop of wheat, on at least 5 acres - - -	10
greatest number of bushels of potatoes on one half an acre	5
greatest quantity of flax from half an acre hackled and prepared for the spinning wheel	5
greatest quantity of Indian corn raised from one acre - -	5

These rewards compared with those of older societies, may appear small; but the farmers and others are informed, that the rewards as well as the objects of them, will be extended in proportion as the means of the institution are increased. And in a short time the directors hope to include as objects of reward, crops of all the different kinds of grain and culinary vegetables; modes of cultivation, manures, fences, condition of farms, and generally all improvements which mark the superior industry and enterprize of the farmer and cultivator.

☞ All manufactured articles for which rewards will be given must be the production of the county of Allegheny.

It is to be distinctly understood that in every case when the Directors shall consider the object presented as not deserving the reward, they reserve to themselves the right of rejecting it, although by a literal construction it would be entitled to a reward. In all instances where premiums shall be applied for, the directors will require such evidence as to them shall be satisfactory.

Articles of silver plate appropriately engraved will be given as rewards, in lieu of money, but corresponding in value to the respective sums proposed.

All farmers and others are requested to send to the fair such fine animals and home manufactured articles as they shall be disposed to sell, as ample accommodations will be provided, and an Auctioneer employed to make sale without charge.

WILLIAM WILKINS,
President.

Harmar Denny, Secretary.
Pittsburgh, June 24, 1822.

BY-LAWS,

For the Government of the Society, for the promotion of Agriculture and Domestic Manufactures, in and for the County of Allegheny.

ARTICLE I.

The attention of this Society shall be confined to Agriculture, Rural affairs, and Domestic Manufactures. They will carefully avoid topics which are productive of dissention, or calculated to withdraw their attention from the objects of common concern.

ARTICLE II.

Every person on becoming a member the Society, shall pay to the Treasurer thereof, One Dollar, and shall sign an agreement, promising to pay as long as he shall remain a member of the Society, the sum of one dollar or more, annually to the Treasurer thereof.

ARTICLE III.

Sect. i. The Society shall meet annually on the last Monday of October, at such place as the directors shall fix upon, and continue from day to day until the business to be transacted at such annual meetings shall be finished.

Sect. ii. At said annual meetings there shall be a Cattle-Show, and general exhibition of specimens of Domestic Manufactures,—Agricultural productions,—Implements of Husbandry, and any new or useful improvements or inventions relating to Agriculture or Manufactures.

Sect. iii. After the Cattle-Show, and Exhibition shall have closed, essays on the subjects of Husbandry, or Manufactures may be read or addresses delivered.

Sect. iv. "At the annual meetings the Society shall determine upon such articles of agriculture, production, or improvement in domestic manufactures, as in their judgment are entitled to encouragement by rewards, and shall also at the same time fix, ascertain and publish such rewards, and the conditions whereon the same shall become due, and payable to the person or persons who shall by his, her or their skill, or industry, according to such conditions, become entitled to the same."

ARTICLE IV.

Sect. i. The directors shall publish in the News-papers as often and at such times as they may deem expedient, for what objects, articles of agriculture, production or improvement in Domestic Manufactures, rewards will be given, specifying the value and different kinds of rewards, to be given, and the conditions whereon the same shall or may be obtained.

Sect. ii. The directors or a majority of them at the annual meetings, after the Cattle-Show and the exhibition is closed, "shall meet to hear and examine the proofs and specimens produced by the person or persons applying for any reward, and shall determine and adjudge whether any or either of the applicants be entitled to the reward, advertised according to the conditions thereto annexed." The directors shall then at a time to be fixed on by themselves award and distribute the premiums to those persons who shall have deserved the same.

Sect. iii. The directors shall announce through the public papers,—the names, occupations and residence of each individual to whom a reward shall have been adjudged, and the nature, value and amount of such reward and for what it was granted.

Sect. iv. The directors shall prescribe and publish previous to the annual meeting, where the same shall be held, the rules, regulations, arrangements, and order of proceeding to be observed during the continuance of the annual meeting.

Sect. v. The Directors shall provide and arrange suitable accommodations for the Cattle-Show, exhibition of manufactures and ploughing matches, to be held on the annual meetings.

Sect. vi. [illegible]tors, with such other persons as may be appointed for this purpose to examine into and report to to the President quarterly, as far as may be practicable, the state of agriculture and of the growing crops in those parts of the county as may come under their particular observation. To report all improvements in husbandry, the introduction of valuable trees, seeds and manures, of new and improved implements of agriculture, and any new improvement or invention, relating to manufactures, as well as all such other matters as may promote the objects of the Society, which reports shall be delivered to the Secretary, to be preserved among the archieves of the Society.—The directors shall also at the annual meetings make a report to the Society of the general state of agriculture and manufactures in the county.

ARTICLE V.

Sect. i. All the officers shall be elected by ballot, and due notice must be given of the hours and place of holding the election.

Sect. ii. The Directors shall appoint three disinterested persons to act as judges at the election, to receive and count the ballots, and to make a true return of the election.

Sect. iii. The judges shall keep a correct list of the names of the voters, and of the number of votes given in for each officer, and deliver the said list, tally-papers and return of the election, certified by them, to the Secretary.

Sect. iv. No person, shall be permitted to vote at any election for officers who shall or may be in arrears for his annual subscription or any part thereof.

SECT. V. The treasurer shall furnish the judges of the election with a correct list of all delinquent subscribers, and the amount due from each.

ARTICLE VI.

Persons proposing for admission shall make application to the board of directors, through any member of the board, and shall be admitted by a Majority of the directors agreeing to the same.

ARTICLE VII.

All candidates or applicants for premiums shall make known his, her, or their intentions in writing at any time before 9 o'clock A. M. of the day appointed for holding the Cattle-Show and exhibition, giving a full and minute account of the article, production or improvement offered for premium, which description shall be registered by the secretary in a book to be kept for that purpose.

ARTICLE VIII.

The duties of the President shall be to preside at all meetings of the Society and of the directors—to superintend the general concerns of the society—to maintain all useful correspondence in relation to the objects of the Society, and make from time to time, such communications to the Society as he may deem useful and proper—call meetings of the directors when he shall think it necessary, or upon the written request of three directors; and shall on the request of a majority of the directors, call special meetings of the Society. He shall certify all copies of the proceedings, of the directors of the Society and direct the seal of the Society to be affixed to the same when necessary.

ARTICLE IX.

SECT. I. The Secretary shall keep regular minutes of the proceedings of the directors, and of the Society, keep a list of the members and [illegible], he shall transcribe into a book all by-laws, adopted by the society.

SECT. II. It shall be the duty of the secretary to keep a book into which he shall register the names, occupations and residence of each and every applicant for rewards, together with a description and account of the article, production or improvement, such applicant may offer for premium and also note to whom premiums may be awarded.

SECT. III. The Secretary shall take charge of all the papers and documents belonging to the Society, and preserve all reports made by the directors and others and all essays that may be read in the Society in relation to agriculture, manufactures or any of the objects of the Society.

SECT. IV. The Secretary shall have the care of the books or Library, belonging to the Society, which he is authorised to give out to any member or members, or other persons subject to such regulations, as the directors may prescribe.

SECT. V. The Secretary shall have charge of the seal of the Society, and affix the same to such papers, or documents only, as the President may direct.

OFFICERS FOR THE PRESENT YEAR.

WILLIAM WILKINS, *President.*
EBENEZER DENNY, *Treasurer.*

DIRECTORS.

FRANCIS M'CLURE,	*of Mifflin*	*Township.*
GEORGE WALLACE,	*of Pitt.*	*do.*
CHRISTOPHER COWEN,	*of Fayette*	*do.*
HENRY BELTZHOOVER,	*of St. Clair*	*do.*
CHARLES H. ISRAEL,	*of Mifflin,*	*do.*
THOMAS CHALFANT,	*of Plumb.*	*do.*
DUNNING M'NAIR,	*of Pitt.*	*do.*
WILLIAM LEA,	*of St. Clair.*	*do.*
JOHN FRITCHMAN,	*of Versailles,*	*do.*
ANTHONY BEELEN,	*Pittsburgh.*	

HARMAR DENNY, *Secretary.*

* * *

Seeing no reason why our friends, the Farmers should not occasionally relish a good dish of humour, as well as as other folks—we expect their indulgence in copying from the Intelligencer an ingenious oratorical celebration of the powers, dignified propensities, uses, Natural History, and character of that important personage—Mr. Hog—their great friend and stand-by, in good and bad times, especially in Maryland and Virginia. It will serve to shew them how much a sprightly imagination can find to say, on a *gross* subject, especially, when as in this case; it emanates from the fertile brains of a *fat* gentleman, a *bon vivant* and a *liberale*, judging from the oily flow of his wit, and the generous tenor of his allusions on religion, and politics.

The oration being rather long for this paper, we have omitted the conclusion of it, and have added some extracts, from venerable authority to shew, that the humorous author has not over-rated the dignity of his subject.

Edit. Am. Far.

THE HOG.

AN ORATION WRITTEN FOR MASTER T. J. L.*

Respected Preceptor, and beloved Classmates:

Tired with having recourse to our school books for studied pieces of elocution, for our declamatory exercises, which, though [illegible] their various beauties, have become in a manner uninteresting from continual repetition, I have ventured, like a nestling from the branch, to take a flight of my own, with a view to try my powers. Should I, in this attempt, call forth your risible faculties, by blending together, in the repast I am about to offer you, the *Hog* and the *Fine Arts*, *Gastronomy* and *Beauty*, the *Holy Alliance* and *Stump Orators*, which I propose to serve up, after the German manner, garnished with American brains, and a few French nick-knacks, I must assure you that mirth is not my sole object: A moral, as you will find by listening to me with indulgence, may be drawn from a *Pig*, as well as from the democratic Ant, or monarchical Bee.

The Hog is the king of all unclean animals; his empire is the most universal, and his qualities the most unequivocal of any other. He is the sovereign of the cook-shop; without him we should have no *lard*, no forced meat balls, nor fixed ammunition for the frying pan; no roast pigs—in short, no kitchen.

Your Willich's, Volneys, Buchans, and Meases, cry in vain that his flesh is heavy and laxative. Our Mitchills and Physicks, Huntts and Worthingtons, may tell us, if they please, that it is indigestible and scorbutic; we know they would be very sorry were we to believe them; for, on the score of *bilious fevers* and *dyspepsies*, the hog is the best feather in their caps. The Jews, though they regard him with horror, as do some Christians, (many of whom are perfect Jews, while many Jews excel the Christians in the practice of every virtue,) yet neither will hesitate to eat good blood puddings, when they can get them.

If you want to learn the value of the Hog, consult the French cook, who knows how to dress eggs *in six hundred and eighty five different ways*, and he will tell you that the *artist* alone is at the head of the culinary profession who has triumphed over every obstacle, by varying his *compositions* in such a manner as to give the flesh of the Hog the most learned, exquisite, and multiplied forms.

> " To mix the food by vicious rules of art,
> To kill the stomach, and to sink the heart;
> To make mankind to social virtue sour,
> Cram o'er each dish, and be what they devour,
> From this the kitchen muse first framed her book,
> Commanding sweet to stream from every cook:
> Children no more their antic gambols tried,
> And friends to physic wonder'd how they died."

Thus sang our inimitable Hasty-pudding bard; and yet, had we asked him to name his favorite dish, he would have answered, *Pork and Beans*, with the same simplicity as he informed us that all his bones were made of Indian corn. Put the same question to a member from the 'Ancient Dominion,' and he will tell you *Hog* and *Hommony*; to one from Maryland, and he will answer, the wing of a *Mud Lark*;† to the chairman of a committee, who maintains that there is no *report* like the report of a cork, ' no digest of laws like the laws of digestion,' and he will reply *Ham* and *Chickens*. Even the Judge who lost his hat the other day in a rencontre with a drove of these sturdy grunters moving heedlessly down the Pennsylvania avenue to the pot, the stew-pan, smoke house, harness-tub, and spit, will say, *Bacon* and Eggs.

Nature has so arranged it, that every part of the Hog is good—there is nothing in him to reject. The *fine arts* have disputed with the kitchen the honor of stripping him, and while many a 'knight of the dishclout' owes his fortune to the Hog, his bristles have been the instrument of the glory of a West and a Trumbull, and have added to the fame of many an epic poet, in a choice metaphor.

> " Thy hair so *bristles* with unmanly fears
> As fields of corn that rise in bearded ears."

The gouty nabob's limbs, the dapper dandy's head, the house-maid, valet, chimney sweeper, and shoe-black, are all indebted to him; while the divine mouth of Miss ——, whose pouting lips, ' resembling blushing berries cast on snow,' ' I never kissed, *perhaps* never shall,' owes half its sweetness to the Hog.‡

When treating of this valuable animal, we are at a loss to know how to get into the subject, or at which end to take him. If we begin at the most noble part, we shall discover that, without much labor, it is transformed for the tables of princes, so as to resemble (which we hold contrary to the arts of civilization) the head of a wild Boar. His cutlets, whether broiled simple in *papillote*, or served in *ragout*, are gratifying to our sensuality. His thighs and shoulders have contributed to the riches and reputation of Virginia, Westphalia, and Bayonne. His ears and tongue are tidbits when operated upon by an expert cook; and his *uprights*, when dressed after the consummate manner of *Saint* Mince, are preferred by all the members of the Holy Alliance to that plain, though famous American dish, the *Rights of Man*, the stamina of all good constitutions, which the sovereign people will finally have to cram down their legitimate throats with less ceremony than we stuff young turkeys, before they know what is good for themselves and those who *nourish* and *support* them.

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* *Lest the author should be considered as a finished* Gastronome, *it is but in justice to himself, as well as to the inimitable author of the* Almanac des Gourmands, *to state, that he is indebted to that amusing work for many of the culinary and other articles to be found in this Eulogy.*

† *Mud Lark—the Marylanders' term for Hog. Thus, the Wing of a Mud Lark, in the slang of the country, is a Ham.*

‡ *By the Tooth Brush.*

The Hog's haslet, intestines, web, and scrapings, form the essentials and tubes of all our sausages. Even his blood has the advantage over that of all other animals, of being turned divers ways to the cravings of our appeiites. His meat, hashed fine, in addition to the various metamorphoses it is subjected to, is the principal ingredient of that exquisite stuffing which accommodates itself so marvellously to the cavities, of what to that boasting feeder John Bull is rara avis—*a Roasted Turkey.* His breast and middlings, when consigned to the pickle, are alike estimable, whether garnished with greens or engulphed in a New England chowder; while if hashed in small cubes, and studded like pearls over the liver of a calf, the crested *fricandeau* rises to our view, to reign the queen of all the senses, and again, when cut in transparent slices to decorate the breasts of patridges, woodcocks, snipes, quails, ortolans, red birds, and such like superlatives of the table, they supersede the necessity of larding or basting in the usual way—giving a flavour to these roasted delights which the delicate palates of such renowned epicures as your Tom Brattles of America, D' Aigrefeuilles of France, and Quins of England, find incomparable. Shall we mention Brawn, his spare-rib, Chine, the rasher of bacon or pork, sprinkled with vinegar, and sweetened with all the boatmen's delight, and his *head* called, when deprived of all its bones, *a cheese?* The very gastric juice of a true *Gastronome*, on his beholding it, rises to the mouth, impatient to envelope it.

Then comes his skin to form the *Borachos*, in which the Spanish and Portuguese vintagers transport their generous wine, called by an old *Chanoine* the *milk* of the aged, the *balsam* of the adult, and the *vehicle* of the epicure. Then again it is destined for the *creble* and the *seive*, and finally, to prove its superior excellence, on the saddle of the horseman. In this shape how many stump orators it takes astride, and bears along through bog and briar, in Indian track, and over turnpike, vexing, by its durability and pliability, the coarser texture of its rough neighbors, until by "stooping down, as he must needs who cannot sit upright," these idols of the people arrive, with their *noble* suffering parts, at the crimson seat of honor.

In short, from the St. Croix to the Mississippi, from the Blue Ridge to the Rocky Mountains, what would man be without his Hog? His virtues and his worth are known to all, from the Mayor of New York, for whom he has long officiated as scavenger general, to that hardy ocean-troubler, the Marblehead fisherman, of whose Cod he is the aid-de-camp; and, though all are indebted to him for so many enjoyments, yet they never mention him but in the language of abuse, and never cease to load his name with the most opprobrious terms.

Not so the ancients. They honored him by sacrificing him to Ceres, the goddess of abundance, for having *taught man how to plough the earth.* The Egyptians sacrificed him to the full moon and to Bacchus. They regarded him, too, as the symbol of intrepidity, and when in his fury ravaging vineyards and harvests, as a superb and cruel conqueror, though they at the same time held his flesh in aversion as unclean. The death of the wild boar of the mountain of Enymanthe, was one of the *twelve labors of Hercules*, in whose time the Hog was immolated on wedding days, as an emblem of fecundity. He was also sacrificed to Diana, and in the Island of Crete he was considered as a sacred animal. In short, he has been sung over by High Priests, immortalized by Poets, and his virtues have been recorded by sage historians.

What school-boy does not recollect the inspired seer, who read the oracles of destiny to Æneas, foretelling the hero that his wanderings would not cease until he should espy the predestined, infallible signals of civilization and future grandeur, a white sow recumbent with her litter of pigs, emblem of a multiplying people, the sources of wealth and power.

In Rome, the Hog was held in the highest estimation, and there the most particular attention was paid to the *art* of cleaning, feeding and fattening him; an *art*, which the Latin authors on rural economy called *Porculantio*. Under the emperors, the vulgar luxury of *Glutony*, (for a fine polished *Gastronome* was not known in those days,) was carried to great excess, even to a cruelty too disgusting to mention. Among the opulent *ferocious* Romans, (as Lady Morgan very properly styles them,) they had two celebrated ways of preparing and cooking a hog—one consisted in serving him up, as large as life, with one side boiled and the other roasted. The other was called the *Trojan* manner, in allusion to the famous horse of Troy, stuffed with combatants. It consisted of taking out all the insides of the Hog, and then forcing him, with every species of game and other victims, filling the crevices with oysters, the whole moistened with costly wines and rich juices. This preparation of the Trojan Hog led to such extravagancies that it became the object of a sumptuary law.

We have heard some gentlemen, from the Eastern Shore of Maryland, boast of their roasted Hogs, after the West India manner, but we suspect they never heard of such *barbecues* as these, which appear to us to be as extraordinary as the infernal Venison—a roasted tiger stuffed with tenpenny nails, which a *terrific* itinerant preacher once told his hearers his Satanic Majesty served up to all sinners.

It appears from various historians that, among the less ancient people of Europe, pork was held in such high repute as to form, (as in our new settlements,) not only their common food, but also the principal article of their best repasts.—The Salique law treats more of the Hog than of any other domestic animal. One of its chapters is confined altogether to the punishment of hog stealing—*de furtis porcorum.* Formerly the greatest revenues of the *Mother* church consisted in her hog tithes. In those days the corpulent priests of France, who "larded the lean earth as they walked along," and whose tutelar *Saint*[*] has ever since been represented by artists with a Hog at his feet, were so fond of Pork, that the dishes destined to bear it to the table were called *Bacconiques*, from the old worn Baccon or Bacon, which signified a fatted pork or Hog. It was then these *bon vivans* daily invoked their guardian,

"That their life, like the leap of their patron
might be,
[†]*Du lit a la table, de la table au lit.*"

After all that has been said of the utility of the Hog, in olden and modern times, we cannot but think that to him, instead of the lion, belongs the title of the king of animals; in point of instinct, (by which he selects 72 species of vegetables and rejects 171,) sagacity, and docility, when tutored, he is but little, if anywise, inferior to the dog, beaver, and half-reasoning elephant. Who has not heard of the learned Pig spelling words, pointing out names, and designating cards? In the towns of Europe, when the swineherd sounds his horn, every Hog leaves his stye to follow him to the forest or fields. If a storm is approaching, or a change of wind or weather is about to take place, the Hog is the first with his *Barometer* nose, true as *Torricelli's* best instrument, to make the discovery and to warn his keeper by his cries and movements. With a knowledge of this fact, the conjurers tell us, "he is the only animal who sees the wind," by which means he is enabled, on the principle of carpe diem, to avoid foul weather, and enjoy the fine. He is also endowed with *sensibility* as well as instinct, and has one quality which distinguishes him from all others of the brute creation—that of running to the aid of all his brother hogs in distrees and difficulty, braving the greatest dangers and the rudest treatment for the love of *kin.*

OF THE NATURAL HISTORY OF THE HOG.

Before we proceed to the chief design of this work, which is to treat of the *Breeding of Swine*, the following account of the natural history of the animal may not be unacceptible to the reader.

To facilitate the study of Natural History, its various objects have been divided into classes, by selecting the properties which are common to many. As Nature herself, however, has drawn no very exact line of distinction between the different species of animals, it is often difficult to determine to which class some animals belong, or which they most resemble; of this the hog, or swine, is a remarkable example. It is like the animals of the horse kind in the number of its teeth; in the length of its head; and in having but a single stomach: it is like the animals of the cow kind in its cloven hoofs, and in the position of the intestines; and it is like the animals of the claw footed kind, as the lion, the cat, and the dog, in its appetite for flesh, in not chewing the cud, and in its numerous progeny.

The animals of the hog kind, therefore, possess in the scale of existence a situation intermediate between those that live upon flesh, and those that live upon grass, being ravenous like the one and inoffensive like the other. Like the rapacious kinds, and they are found to have short intestines; their hoofs also, though cloven to the sight, will, upon anatomical inspection, appear to be supplied with bones like beasts of prey; and the number of their teats also increase the similitude: on the other hand, in a natural state they live upon vegetables, and seldom seek after animal food, except when urged by necessity. They offend no other animal of the forest, at the same time that they are furnished with arms to terrify the bravest.

The wild boar, which is the original of all the varieties we find in this creature, is by no means so stupid nor so filthy an animal as that we have reduced to tameness; he is much smaller than the tame hog, and does not vary in his colour[*] as those of the domestic kind do, but is always found of an iron grey, inclining to black; his snout is much longer than that of the tame hog, and the ears thorter, rounder, and black; of which colour are also the feet and the tail. He roots the ground in a different manner from the common hog'; for as this turns up the earth in little spots here and there, so the wild boar plows it up like a furrow, and does irreparable damage in the cultivated lands of the farmer. The tusks also of this animal are larger than in the tame breed, some of them being seen almost a foot long. These, as is well known, grow from both the under and upper jaw, bend upwards circularly, and are exceeding sharp at the points. They differ from the tusks of the elephant in this, that they never fall; and it is remarkable of all the hog kind, that they never shed their teeth as other animals are seen to do. The tusks of the lower jaw are always most to be dreaded, and are found to give very terrible wounds.

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[*] *St. Anthony.*

[†] *From the bed to the table, the table to the bed.*

[*] Domestication and culture, gives *diversity* of form and colour to bird and beast—this cannot be denied, and warrants the inference that great improvements are yet to be made by attention in breeding. *Edit. Am. Far.*

The wild boar can properly be called neither a solitary nor a gregarious animal. The three first years the whole litter follows the sow, and the family lives in a herd together. They are then called beasts of company, and unite their common forces against the invasions of the wolf, or the more formidable beasts of prey. Upon this their principal safety while young depends, for when attacked they give each other mutual assistance, calling to each other with a very loud and fierce note; the strongest face the danger; they form a ring, and the weakest fall into the centre.† In this position few ravenous beasts dare venture to attack them, but pursue the chace where there is less resistance and danger. However, when the wild boar is come to a state of maturity, and when conscious of his own superior strength, he then walks the forest alone, and fearless. At that time he dreads no single creature, nor does he turn out of his way even for man himself. He does not seek danger, and he does not much seem to avoid it. He does not shun the combat even with the lion, if provoked; he does not seek him to attack, but will not fly at his approach; he waits the onset of the lion, which he seldom makes unless compelled by hunger, and then exerts all his strength, and is sometimes successful. We are told of the combat of a lion and a wild boar, in a meadow near Algiers, which continued for a long time with incredible obstinacy. At last, both were seen to fall by the wounds they had given each other; and the ground all about them was covered with their blood.

This animal is therefore seldom attacked but at a disadvantage, either by numbers, or when found sleeping by moon-light. The hunting the wild boar is one of the principal amusements of the nobility in those countries where it is to be found. The dogs provided for this sport are of the slow heavy kind. Those used for hunting the stag, or the roe-buck, would be very improper, as they would too soon come up with their prey; and, instead of a chace, would only furnish out an engagement. A small mastiff is therefore chosen; nor are the hunters much mindful of the goodness of their nose, as the wild boar leaves so strong a scent that it is impossible for them to mistake its course. They never hunt any but the largest and the oldest, which are known by their tracks. When the boar is *rear'd*, as is the expression of driving him from his covert, he goes slowly and uniformly forward, not much afraid, nor very far before his pursuers. At the end of every half mile, or thereabouts, he turns round, stops till the hounds come up, and offers to attack them. These, on the other hand, knowing their danger, keep off, and bay him at a distance. After they have for a while gazed upon each other, with mutual animosity, the boar again slowly goes on his course, and the dogs renew their pursuit. In this manner the charge is sustained and the chace continues till the boar is quite tired, and refuses to go any further. The dogs then attempt to close in upon him from behind; those which are young, fierce, and unaccustomed to the chace, are generally the foremost, and often lose their lives by their ardour. Those which are older and better trained are content to wait until the hunters come up, who strike at him with their spears, and, after several blows, despatch or disable him. The instant the animal is killed, they cut off the testicles, which would otherwise give a taint to the flesh; and the huntsmen celebrate the victory with their horns.

The hog, in a natural state, feeds chiefly upon roots and vegetables; it seldom attacks any other animal, being content with such provisions as it can procure without danger. Whatever animal happens to die in the forest, or is so wounded that it can make no resistance, becomes a prey to the hog, who seldom refuses animal food, how putrid soever, although it is never at the pains of taking or procuring it alive. For this reason, it seems a glutton rather by accident than choice, content with vegetable food, and only devouring flesh when pressed by necessity, and when it happens to offer; and though, in its domestic state, it seems the most sordid and brutal animal in nature, devouring indiscriminately every thing that comes in its way, yet, in its wild state, it is of all other quadrupeds the most delicate in the choice of what vegetables it shall feed on, and rejects a greater number than any of the rest. The cow, for instance, as we are assured by Linnæus, eats two hundred and seventy-six plants, and rejects two hundred and eighteen; the goat eats four hundred and forty-nine, and rejects an hundred and twenty-six; the sheep has three hundred and eighty-seven, and rejects an hundred and forty-one; the horse eats two hundred and sixty-two, and rejects two hundred and twelve; but the hog, more nice in its provision than any of the former, eats but seventy-two plants, and rejects an hundred and seventy-one. In the orchards of peach-trees in North America, where the hog has plenty of delicious food, it is observed, that it will reject the fruit that has lain but a few hours on the ground, and continue on the watch whole hours together for a fresh wind-fall.

However, the hog is naturally formed in a more imperfect manner than the other animals that we have rendered domestic around us, less active in its motions, less furnished with instinct in knowing what to pursue or avoid. The coarseness of its hair, and the thickness of its hide, together with the thick coat of fat that lies immediately under the skin, render it in some degree insensible to blows, or rough usage. Its other senses seem to be in tolerable perfection; it scents the hounds at a distance; and, as we have seen, is not insensible in the choice of its provisions. When the wind blows with any vehemence, it is so agitated as to run violently towards its sty, screaming horribly at the same time, which seems to argue that it is naturally fond of a warm climate. It appears also to foresee the approach of bad weather, bringing straw to its sty in its mouth, preparing a bed, and hiding itself from the impending storm. Nor is it less agitated when it hears of any of its kind in distress: when a hog is caught in a gate, as is often the case, or when it suffers ringing or spaying, all the rest are then seen to gather round it, to lend their fruitless assistance, and to sympathise with its sufferings. They have often also been known to gather round a dog that had teased them, and kill him upon the spot.

Most of the diseases of this animal arise from intemperance; measles, imposthumes, and scrophulous swellings, are reckoned among the number. It is thought by some that they wallow in the mire to destroy a sort of a louse or insect that is often known to infest them. They are generally known to live, when so permitted, to eighteen or twenty years; and the females produce till the age of fifteen. As they produce from ten to twenty young at a litter, and that twice a year, we may easily compute how numerous they would shortly become, if not diminished by human industry. In the wild state they are less prolific; and the sow of the woods brings forth but once a year, probably because exhausted by rearing up her former numerous progeny.*

The wild boar was formerly a native of Great Britain, as appears from the laws of Hoeldda, the famous Welsh legislator, who permitted his grand huntsman to chace that animal from the middle of November to the beginning of December. The vast forest that grew on the north side of London, was the retreat of many fallow deer, wild boars, and bulls. The Caledonian forest, supposed to be Ettrick forest, was anciently the retreat of the Caledonian boars, which were remarkable for their fierceness, and which are now to be no where met with in Britain. Inglewood forest, betwixt Carlisle and Penrith, was once the retreat of the wild boar. During the day, he commonly remained in the most sequestered part of the wood, and came out in the night in quest of food.

The snout of an old boar is said to be the only part that is esteemed,† but every part of the castrated and young boar, not exceeding a year old, makes delicate eating. The ancients castrated young boars, which they carried off in the absence of the old ones, and returned them back to the woods, where they grew fat, and their pork was much better than that of the common hogs.

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† In single or associated combat the hog is a model of skill even for biped warriors.

Edit. Am. Far.

*Goldsmith's History of the Earth and Animated Nature.

† At the time when fresh meats were seldom eaten, brawn was considered as a great delicacy; the boar's head soused was anciently the first dish on Christmas-day, and was carried up to the principal table in the hall with great state and solemnity. Hollingshed says, that in the year 1170, Henry I., upon the day of the young prince's coronation, served his son at table as sewer, bringing up the boar's head with trumpets before it, according to the manner. There is also a singular ceremony relating to the boar's head, still retained at Queen's College, in Oxford. For this indispensible ceremony, as also for others of that season, there was a Carol, which Wynkyn de Worde has given us as it was sung in his time, with the title, "*A Carol bringing in the Boar's Head.*"

Caput Apri defero
Reddens Laudes Domino.
The boar's head in hand bring I,
With garlandes gay and rosemarye;
I pray you all sing merrely,
Qui estis in convivio.

The boar's head, I understande,
Is the chief servyce in this lande,
Looke wherever it be fonde,
Servite cum cantico.

Be gladde lordes, both more and less,
For this hath ordained our Stewarde,
To chere you all this Christmasse,
The boar's head with mustarde.

This Carol, says Mr. Warton, is still retained at Queen's College. There is indeed in the college an old legend, that a wild boar which infested the neighbourhood of Oxford, was killed by a taberdar of this college on Christmas-day, as he was going to serve a church; and that he killed it by thrusting his copy of Aristotle down the throat of the animal, protecting his arm with some part of his gown. This story, it is probable, may have contributed to the continuance of the ceremony of the boar's head at Queen's College longer than any where else. The song, however, has no allusion to it; it simply states, that the boar's head is the rarest dish in all this land, and that it has been provided in honour of the King of Bliss.

There is a song on this supposed feat of the taberdar, written by the present Dr. Harrington of Bath, and printed in the "Oxford Lausage," so full of wit and humour, that we assure ourselves our readers will not be displeased to find it annexed to this note.

IN HONOUR OF THE CELEBRATION OF THE BOAR'S HEAD,

AT QUEEN'S COLLEGE, OXFORD.

I sing not of Roman or Grecian mad games,
The Pythian Olympic, and such like hard names;
Your patience a while, with submission, I beg,
Whilst I study to honour the feat of Cool Reg.
Derry down, down, down, derry down.

No Thracian bowls at our rites e'er prevail,
We temper our mirth with plain sober mild ale;
The tricks of old Circe deter us from wine,
Though we honour a boar we won't make ourselves swine.
Derry down, &c.

Great Milo was famous for slaying his ox,
Yet he proved but an ass in the cleaving of blocks;
But we had an hero for all things was fit,
Our motto displays both his valour and wit.
Derry down, &c.

Stout Hercules labour'd, and look'd mighty big,
When he slew the half-starved Erymanthian pig:
But we can relate such a stratagem taken
That the stoutest of boars could not save his own bacon.
Derry down, &c.

So dreadful this bristle-back'd foe did appear,
You'd have sworn he had got the wrong pig by the ear,
But instead of avoiding the mouth of the beast,
He rammed in a volume, and cried *Græcum est.*
Derry down, &c.

In this gallant action such fortitude shewn is,
As proves him no coward, nor tender Adonis;
No armour but logic, by which we may find
That logic's the bulwark of body and mind.
Derry down, &c.

Ye squires, that fear neither hills nor rough rocks,
And think you're full wise when you outwit a poor fox,
Enrich your poor brains, and expose them no more,
Learn Greek, and seek glory from hunting the boar.
Derry down, &c.

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FROM THE NEW ENGLAND FARMER.

PREPARING FLAX.

We esteem ourselves fortunate in being permitted to lay before our readers the following extracts from a correspondence between His Excellency the Governor of Connecticut, and S. W. Pomeroy, Esq. of this State. The subject is of great importance, and if it continues to engage the attention of men of mind, influence, character and standing, its discussion may be the means of giving a new staple to New England of little if any less importance than cotton or tobacco to Southern sections of the Union.—Ed. N. E. F.

Litchfield, Con. June, 25, 1822.

Dear Sir,

I have read with great satisfaction your Essay on the Cultivation of Flax, and consider it as the best I have seen; what we now want, is a discovery of the best means of extricating the glutinous matter, and decomposing the woody fibre, without fixing the colour, so as to render the process of bleaching, difficult and expensive. The common process of rotting in the air, we know will never give us good Flax, and the process of water rotting will not be practised by our people generally; it being a disagreeable and unhealthy business to those employed in it, and besides poisonous to our streams of water.

The extension of our Flax culture, will, in my opinion, greatly depend upon our success in finding out a mode by which common farmers can extract the gluten, and weaken the woody fibre, so as to render Flax, after being stripped of its seeds, manageable by such operations or machines, as can be introduced into common use.

The practical question is therefore, does there, or does there not exist in nature, *a cheap and common* solvent, which can be applied to Flax, *in mass*, by operative farmers?

You live in a part of our country which is deeply interested in this question. You, more probably than any person with whom I am acquainted, can discover this *solvent*, (if it exist,) and the public attention having been much attracted to your publication, your recommendation would have a most extensive and salutary influence.

I therefore take the liberty to request your particular attention to this interesting subject. I feel confident that *the thing desired can be done*, but I cannot command the means of making the necessary experiments: I can only suggest hints, which may be useful.

Flax may, in mass, be subjected to the action of steam. This may of itself extract the glutinous matter, and sufficiently weaken the woody fibre, after being merely dried in the air: Will it fix the colour of the plant? The Flax, before steaming, may be soaked in weak lye, with or without lime or lime water, and with, or without soap suds, and urine. Near the coast, salt water, with and without the combinations before mentioned, may be useful.

Any of the chymical processes of bleaching, may, for ought I can perceive, be as well applied to Flax in mass, before it is broken and dressed, as afterwards. A question must however arise, respecting the expences of all the processes, compared with the value of the Flax, when it has been prepared as an article of commerce.

I send you samples of Flax, which as I understand, were prepared in Hill and Bundy's Machine. The *Yellow* is from Flax which had not been rotted; and the *white* is the same article, after being bleached, by means of soap suds, or a weak solution of muriatic acid.

Your friend and
Obedient servant,
OLIVER WOLCOTT.

S. W. Pomeroy, Esq.

Brighton, 14*th July*, 1822.

Dear Sir,

Your highly valued favour of 29th ult. with samples of *Flax*, prepared in Hill and Bundy's machines, came to hand a few days since.

Soon after the publication of the "Essay on Flax Husbandry," the Board of Trustees of the Massachusetts Agricultural Society, promulgated the offer of liberal rewards for the best experiments on the preparation of Flax, by *boiling*, *steaming* or *any other* than the usual mode.—Though the quantity required was only 75 lbs. and the period for receiving it continued till the middle of January, none was exhibited; and as the competition was not confined to local bounds, there is reason to believe that the publication of the invention by Messers. Dey and Macdonald, of a machine that would supercede the necessity of *any* preparation, and its successful operation confidently relied on, had an effect to paralize all efforts of the kind.

From the best information I was able to collect, before my Essay went to press, I felt a strong conviction that the machines of Hill and Bundy could not be made extensively useful in this country; and if their neglect in Great Britain, except for employing infirm people and children in poor houses and cottages, was not sufficient, I have since received intelligence from a source entitled to confidence, that places the question beyond all doubt. An acquaintance with a gentleman of respectability, lately arrived from England, has furnished interesting facts connected with the present subject, some of which it may be well to state before I attempt a reply to your queries. This person has been extensively engaged in the manufacture of linen by *machinery* at Leeds. He says that "spinning by hand is mostly abandoned; that last year about *twenty thousand* spindles were in operation at Leeds and its vicinity, which worked up *two thousand tons* of flax for fabricks, from the coarsest sort, to those worth three shillings sterling per yard, at as cheap a rate (calculating length and breadth) as cotton is spun, and from flax prepared in the usual way;—that no confidence is placed in the general utility of Hill and Bundy's machines—the price of dressing and bleaching by them being sixpence sterling per pound—" about equal to the cost of the whole material as now used;—that "the advantage of working bleached flax is of no great importance since the discovery and improvements in the process of bleaching with the *oxi muriate of lime*, by which *linen*, even from dew rotted flax, is bleached nearly as cheap as cotton, and, if judiciously applied, without the least danger of injury to the article;"—it should also be considered that cloth made from *bleached* flax must be submitted to a similar process before it is made up for market.

I coincide in the opinion you have expressed, Sir, that "the extension of flax culture will greatly depend upon finding out a mode by which common farmers can extract the glutinous matter and weaken the woody fibre, so as to render the flax manageable by such operations or machines as can be introduced into common use," and sincerely regret my inability to adduce facts in answer to your question, "does there or does there not exist in nature a *cheap* and *common* solvent which can be applied to flax, *in mass*, by operative farmers?" Feeling like yourself, confident that "*the thing desired can be done*," and, although possessed of no data derived from experiments, as you have desired my opinion on the subject I shall submit a few remarks which will pass for what they may be worth.

The candour and liberality manifested by Mr. *Dey*, and the spirit with which he pursues his object, are to be admired; but admitting that his most sanguine expectations will be realized in the successful operation of his machines for separating the fibre or harle from the stem of the plant, yet the very important process of cleansing it from the *glutinous matter* remains to be performed, and the question occurs, "cannot this be done, *in the large way* as *cheap*, and with much less hazard by common farmers with the *raw stem*, as with the fibres after they are separated?" I am inclined to believe that it can. The only objection is the expense and incovenience of managing a more bulky article; but will not the *dressed* flax require equal labour in dividing it into minute parcels for the cleansing process, and uncommon care in handling and drying to prevent immense waste? By applying the solvent to the *stem*, it is reasonable to suppose that the "woody fibre" would be weakened to such a degree that much less power will be required to separate it, and of course less complicated and expensive machines.

It is not probable that the end we are seeking will be *efficiently* attained without the aid of *heat*. *Steam* even from pure water is a most powerful solvent; and I have great faith that with a proper menstruum, it may be successfully applied by *common farmers*. I am led to this conclusion by its operation with a perfectly simple apparatus in *washing clothes*—by far the greatest and most economical improvement yet discovered to disarm *washing day* of its terrors. It consists of a *pot* or *boiler* with a *close cover* into which a *tin* or *leaden tube* is inserted, and a *tub* or *box* with a similar *cover*. The *clothes*, after being wet and a little *soap* rubbed on the most soiled parts of them, are laid upon slates or shelves in the tub or box, the tube is then connected with it, and the boiler nearly filled with water mixed with a weak solution of *potash* or *ley* from the *leach tub*, a fire is put under the boiler late in the afternoon, it boils during the evening and is left simmering till morning, when the clothes are taken out; and they must have been very foul to require any more labour than rinsing once or twice to make them perfectly clean. Now this process is managed by common house maids! What is to prevent *them*, the wives and daughters of farmers and even farmers themselves from attending to a similar process on a large scale? I apprehend no danger from *steam*, in fixing any *stain* or *colour* that may be communicated by the plant.

We will not inquire for a menstruum within the reach of "common farmers," and it will not be necessary for the present object to combine the bleaching process, though it may follow in a considerable degree. I would here observe that there was an important omission in copying my Essay for the press, in quoting from the transactions of the *Swedish Academy*, of the application of *birch ashes* spread between the layers of flax before the *salt water* was turned on for boiling. Should such a process be found beneficial, *sea water* can be easily and cheaply imitated in the interior country.

Mr. Dey asserts that the materials he has discovered for cleaning and bleaching flax dressed by his machine, "are abundant in every farmer's house." I shall be much mistaken in my conjectures if *ashes*, *salt*, and perhaps *lime*, with *vegetable acid* or *sour milk* are not the principal constituents of his secret!

The substances used in bleaching will, I believe, either combined or separate, afford the best solvent within our knowledge, for the object in view; and *acids* are considered of primary and indispensible importance; they were formerly produced by the fermentation of *rye meal* or *bran*—*sour milk* was also used as extensively as it could be obtained. But it has been found that a weak solution of *sulphuric acid* answers the same purpose—is more convenient and much cheaper. Oil of vitriol in a highly concentrated state is now manufactured in Boston, and sold at not more than eight cents per pound—one pound of which is said to be sufficient to acidulate two hundred gallons of water. It is probable however that five pounds to that quantity of water, if thoroughly mixed, would not injure the material and accelerate the process.

When we reflect upon the *rationale* of the preparation of flax by the usual method of steeping in water, it appears that it is the *acid* produced by the acetous fermentation that dissolves the glutinous matter; the mere act of fermentation has no other effect than to give *motion* to the *liquid*, as has been demonstrated by eminent bleachers in Great Britain when comparing the effect of sulphuric acid with that produced by fermentation. It is true that by *steeping*, the putrid fermentation which rapidly follows the acetous, hastens the operation and more readily decomposes the *woody fibre*, but with manifest injury to the material! Now it requires ten or fourteen days to prepare flax by *steeping*, when done in cool weather as it should be; if this can be effected in half as many hours with sulphuric acid, even with the expense of *heat*, may it not be the cheapest solvent?

It should be kept in view, that there is a *cellular* oil in flax, which an alkaline ley destroys; this is apparent from the harshness of *linen yarn* that has been boiled in it—the decomposition of this oil may be necessary to the completely bleaching of *fine goods*, but it is important to retain it for *sail cloth* as not only rendering it *soft* and *pliable*, but as a preservative against *mildew*. The *steam* from such ley however, is supposed not to produce that effect.

Whether the *oxi-muriate of lime*, the principal agent now used for bleaching, may be successfully applied as a solvent to the raw stem of flax, can be determined only by experiments; the materials for forming it are abundant and cheap. A *formula* I met with some yeas ago, requires 60 lbs. of *finely powdered quick lime* and 30 lbs. of *common salt* to be mixed with 140 gallons of water in the receiver; into the distilling vessel is put 30 lbs. of *salt*, with 30 lbs. of *manganese*, which are to be well mixed, and 30 lbs. of oil of vitriol, diluted with the same weight of water, turned on. But I am told that great improvements have been made of late—that it is prepared in the *dry way* which renders it conveniently *portable*, and is sold to the bleachers at a very cheap rate.*

Perhaps the simple *muriate of lime* would answer the purpose; in that case the expense would be much lessened, and the operation so simplified as to render it convenient to be used by *operative farmers*.

I should feel extremely happy, Sir, was it in my power, to institute a course of experiments agreeably to your suggestions, and which your partiality supposes me capable of performing; but a pressure of domestic avocations, together with preparations for an expected absence from home, of some months continuance in the autumn, wholly preclude such attempts. At the same time I beg you to rest assured that I shall always feel ambitious, to the extent of my ability, to co-operate for the promotion of RURAL ECONOMY, with one who has devoted so great a portion of life for the advancement of the substantial interests of his country.

With respectful and sincere attachment,
I remain, sir, your obd't serv't,
S. W. POMEROY.

His Ex'y OLIVER WOLCOTT,
Litchfield, Con.

Extract of a letter from J. F. Dana, Professor of Chemistry in Dartmouth College, to the Editor, dated, Sept. 17, 1822.

DEAR SIR,

I was pleased with the correspondence between Gov. Wolcott and Mr. Pomeroy, contained in your paper, which I received yesterday.—The subject is one of great importance to the country.

The application of steam as a means of separating the glutinous matter from flax is suggested by Gov. Wolcott, and probably might be employed with the most decided advantage; but will it destroy the coloring matter? probably not; and the use of steam generated from alkaline solutions seems to be forbidden by the suggestion of Mr. Pomeroy, that alkaline leys destroy a *cellular* oil on which the delicate softness of the flax depends. I wish to inquire, why chlorine or oxymuriatic acid gas may not be employed? The objections to its use in common bleaching will not apply to its use in bleaching flax. Permit me to suggest its application in the following way. Let a convenient apparatus for *steaming* the flax be prepared: into the boiler from which the steam is generated, introduce a convenient vessel of sheet lead which shall contain the materials from which *chlorine gas* is produced, viz. sulphuric acid, maganese and common salt. Now when heat is applied to the boiler to produce steam, the leaden vessel which it contains and which is surrounded by water, will be also heated; steam, and chlorine gas will be formed at the same time; the former will dissolve the glutinous matter, and the latter will destroy the colour, and both will pervade every part of the apparatus. Experiment alone must decide whether this suggestion is practically useful; nor do I know that it has not been tried, and found useless.

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* *The substance of this mode of preparing Bleaching Powder, according to as late an improvement as any we have seen, is as follows:*

Oxygenated muriatic acid is capable of forming a compound with calcareous earth, and with the earths barytes, strontites, and magnesia, in the dry way, that is, without these earths being either suspended, or dissolved in water, and this is effected merely by bringing the oxygenated muriatic gas into contact with these earths in form of lumps, pieces, powder or paste, or into contact with mixtures of them, with such other bodies in the above forms, as do not impede or hinder their attraction for the acid. It has been found that the oxygenated muriates of lime, and of the earths mentioned above, thus formed, when mixed with water, possess the power of removing colour from linen, cotton, and various other vegetable and animal substances, and have been profitably applied for that purpose. See Repertory of Arts, vol. xii. p. 1, sec. series.

If we mistake not, Sir Humphrey Davy, in one of his lectures has intimated that there is danger lest the costic powers of oxymuriate of lime should injure the texture of the material to be bleached; and he therefore prefers magnesia as one of the ingredients of bleaching powder to lime. Simple muriate of lime, as recommended by Mr. Pomeroy, deserves experiment, and perhaps lime slacked with sea water, or salt in solution with water, would be found useful. Care however is necessary not to apply caustic substances of too great strength, and in every case to thoroughly rince the goods in pure water after every application of a bleaching substance, of the nature above described.

ED. N. E. F.

The *muriate of lime*, suggested by Mr. P. has no powers in bleaching, and it is stated by some writers, that it very much weakens the texture of *linen*.

J. F. DANA.

FLAX.

Another machine has been invented by Samuel Davidson, of Romulus, N. Y. for dressing flax. Its whole cost, including the patent right, is only forty dollars. It has been tried by many of the most respectable farmers. They estimate the saving in labour at three fourths, and the saving in flax at one fifth, compared with the common mode; while it leaves the texture of the thread unbroken. By the use of this machine the process of *rotting* may be dispensed with, as it will answer for dressing the flax either with or without rotting.

This improvement promises to be extensively useful—its price is so small that every neighbourhood may easily have a machine. Flax is an article of easy cultivation and great product, if the process of rotting and usual way of cleaning it can be dispensed with, and must become an important staple to the people of the interior for home use, and transport to the seaboard, &c. A pound of flax may be carried any given distance as readily as a pound of corn, pork, &c. The cost of transportation will be the same; but the amount of that cost as to the relative value of the article, will be essentially different. The seed too, if crushed and made into oil, will always find a ready market, and better pay charges for carriage than any sort of provisions that our farmers can raise in the interior. Oil mills may be erected at a small expense, and would yield large profits to their owners, if the supply of seed were abundant, in any part of our country west of the mountains.

We feel both publickly and personally interested in the cultivation of flax and the use of flaxen goods—publickly, because it will add much to the national prosperity; privately, because we cannot have good *paper* without flaxen rags to make it of.

Niles' Register.

From the London Monthly Magazine of February, 1822.

WHEEL CARRIAGES.

A patent has been granted in England to a Mr. Marsh for improvements on wheel carriages.

These improvements may be considered as of two parts: first, the form of the interior of the nave-box of the wheel, and, second, by the mode of attaching the pannels of the carriage to the frame work.

The patentee proposes to make the interior of the box triangular, square, or polygonal, instead of cylindrical, as heretofore.

The nave box being of any of these forms, so small a part of its surface will come in contact with the axle, that the wheel will revolve much more freely, and with less friction than in the present cylindrical boxes, where the axle and box are nearly in contact with each other all round.

The patentee does not confine himself to any regular form, but claims to make the interior angles of the box with blunted or rounded corners; or to use cylindrical boxes with longitudinal ribs, to reduce the surface of the contact, and leave interstices for the reception of the grease, or other matter used to reduce the friction.

To this improvement in the construction of the carriage body, instead of boarding the roof or pannelling up the back and upper quarters as usual, he proposes to leave them open, or in ribs, and to close the space with shutters, doors, or flaps, with rebates on their edges; and these flaps or shutters are attached to the frame work on hinges, so as to be enabled to swing. The external joints of the rebates are covered by slips of metal screwed down, which may be displaced when required. The improvements are proposed to be added to old carriages of any description.

An improvement in the construction of the perch and wings of carriages is also proposed, which consists in the use of bent timbers, instead of cutting the perch and wings across the grain of straight wood, in a curved form. In some carriages he makes the seat fold up into boxes by joining all the parts with hinges of metal or leather; and proposes to attach these folding seats to carriages as additions, concealed by folding together into shallow boxes.

FROM THE BOSTON PATRIOT.

THE SEASON.—*Boston.*

We are informed that rain was never more heartily desired, or more needed, by our country brethren, than at the present moment. In every direction, the brooks and springs are very low, and in some instances entirely dried up. In several of the towns that we have heard from, the farmers find it difficult to procure sufficient water for their cattle. Notwithstanding the excessive drought, however, it is expected there will be no serious deficiency in the crops of either fruit or vegetables, as they have, for the most part, already attained their growth.—Of apples, there is a great abundance—the trees were never, to our recollection, so generally overloaded; and, since water is so scarce, we may reasonably expect that the cider that is now making, will be of an unadulterated kind: In fact, we were informed, by a farmer, a day or two since, whom we saw attending a cider mill, aud asked what quantity of water he should put into each barrel, that he could better spare three buckets of the pure liquor than one of water! We may therefore expect that *good cider* will be brought into our market, in large quantities, and afforded at a reasonable price.

FROM THE ALEXANDRIA HERALD.

Wanboro, Illinois, July 9, 1822.

"*Sir*—In reply to your favour of May 2nd, I cannot give you much encouragement either as a schoolmaster, or a surveyor. Both those departments are fully occupied. As a cultivator of the land, there is room plenty; but without capital, it is a laborious occupation; and with capital, unless great industry and some judgment joined to it, you would be liable to disappointment. If it be your determination to remove into a new country, I believe there is none so eligible as this, on many accounts. Of your own qualifications as to purse or manual powers, you are the best judge. Without some resource in the former, you must depend wholly on the latter. Land may be purchased in plenty at the government price of $1 25 cents per acre; but near the settlement it may be worth from 3 to 4. The prices of produce are extremely low. Indian corn was sold last year at 18¾ cents per bushel; wheat at 50 cents per bushel, and beef at 3 and $4 per cwt.; pork at $2 and 2½. Great quantities of the two latter articles were taken to New Orleans, where they found so good a market, that it is probable that prices at home will be advanced the ensuing season. We have a grateful soil, which supplies our chief wants; therefore we are not depending much on the prices of produce for a subsistence; when these improve, as will probably be the case, I trust we shall be prepared to avail ourselves of them.

Wishing you success, I am yours, &c.

M. BERKBECK."

TO THE EDITOR OF THE AMERICAN FARMER.

Sir, *Moorefield, September*, 1822.

I have long desired that the knowledge of the natural resources of our country, should be more extensively and universally diffused, and considering your paper as an important channel, through which information and suggestions, that have a tendency to advance this important object, may be communicated to the public, I have resolved to make it the means of conveying to it the following observations and facts. Would it not be a politic measure for Congress, to enact a law rendering it obligatory upon the mail carriers to convey specimens of earths, ores, or vegetable substances from the mountainous and unfrequented parts of our extensive country, to the more populous cities, where there are scientific gentlemen who are capable of estimating their value, and willing to communicate the same to the community at large?* By adopting this measure, and increasing the sources from whence information may be obtained, a spirit of investigation would be excited among those, who on account of their own incapacity, and the impossibility of obtaining others to gratify their curiosity, now remain entirely indifferent and inactive. And thus would the necessity be superceded of importing at an enormous expense a number of articles which we consider exoticks, but which are in reality the spontaneous growth of our soil. It is true that the enaction of this law might render the post-office establishments more subject to impositions, yet I apprehend it would be practicable to make a provision, limiting the quantity that should be received, so that it should not incommode the post-masters, or retard the expedition of the mail-carrier.

The *Woad* seed you favoured me with, is well adapted in its nature to our soil, though I am not informed whether it is an useful ingredient in coloring in any other state than the green†. If so

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* *If the Editor may credit the assurance of numerous intelligent Agriculturists, in all parts of the Union, he has rendered great service to the cause, by the distribution of seeds, grain, &c. &c. in parcels, of only half an ounce, the limit of his franking privilege. Yet Congress so far from* extending, *at the last session threatened to destroy even this limited power of doing service to agriculture.*

† *The Editor will take an opportunity.*

I am ignorant in what manner to preserve it or what is its intrinsic value. The *Bene* received from you did not vegetate. I have made an experiment with the *Palma Christi*, it comes to great perfection in our most productive land ; I have raised between 35 and 40 bushels, on a small enclosure containing about 2½ acres, and have not yet finished gathering them. Our season has been extremely dry, more so, than any other within the remembrance of our oldest inhabitants, had it been favourable, I should have been amply compensated for my labour with a crop of about 20 bushels to the acre.

The *Senna* grows in vast quantities, without any cultivation, on the fertile banks of our streams, it is an extremely noxious herb and disagreeable to the taste, of all description of animals. Some gentleman who is acquainted with its nature, would confer a favour upon me, by directing in what manner it should be preserved, and at what season and stage it should be gathered, and what would be its probable value. A sufficiency grows upon our streams, perhaps, to supply the whole United States.

I have grown the *rhubarb* for many years, the root grows well in our bottom land, but the seed does not come to perfection. I have taken up one root of three years old, that weighed five pounds green.

If you should think my observations worth printing, you may do so. I will send a box of Senna to Baltimore, to be inspected.

Yours with Esteem,
ABEL SEYMOUR.

* * *

FOR THE AMERICAN FARMER.

Prince Georges county,
Sept. 20th, 1822.

Dear Sir,

I do not recollect to have seen in your paper, a cure for the disease to which dogs are subject, commonly called the distemper.

Although I am a professed enemy to *curs*, biped and quadruped, yet I confess I feel great respect for some dogs, and take pleasure in relieving them from a malady which let alone, or injudiciously treated, becomes fatal to thousands.

The cure is simple and certain. To a dog eight months old, give 4 grains of Turbeth's mineral, in gruel or any thing else in which it will mix. Keep him from cold water 24 hours, then give 4 grains of crocus metallorum, and turn him out. I have never known this remedy to fail.

Do me the favour to insert in your paper, in any form most convenient to yourself, the following :—

☞ The Editor of this paper wishes to procure for a friend some tobacco seed of the kind called bull face—there are two kinds of this tobacco, the thickset, and the thinset, for each of these kinds, if delivered before next spring, and assured of their being genuine, the Editor will pay five dollars a pound.

The drought in this part of the country is dreadful. I am sure the tobacco crop is lessened one half at least, and I think the corn four-fifths.

* * *

We invite the particular attention of our readers to the following account of the extraordinary productiveness of a farm in New York—we recollect to have been urged to visit it, when at Saratoga Springs, in 1821, and now even more than then regret that we omitted to do so. The memoranda now communicated, were made by a gentleman of the first respectability, in this city.

Editor Am. Farmer.

FOR THE AMERICAN FARMER.

NO FICTION.

AGRICULTURE.

I visited and spent a day at Mr. Slemson's farm in the township of Galloway, Saratoga county, New York. His tract of land or farm contains about 350 acres, of which he cultivates, as yet, only between 80 and 100 acres which are laid off into 8 acre lots.

He has certificates of premiums from the Agricultural Society of that county.

For having the best managed farm in the county.

For having raised 62 bushels of barley from one acre.

For having raised 4½ tons Timothy hay per acre from a lot of 8 acres, and he took the pains to weigh the hay from one of those acres four days after it was cut, and found it to weigh 5 tons and 324 lbs.

For having raised 104 bushels of corn to the acre.

For having raised 357½ bushels potatoes from half an acre.

His method for raising Potatoes is,

He opens a furrow 2 feet 9 inches apart, plants 10 inches apart; hoes or hills them one way only; plants them shallow, namely about 2 inches, as soon as they shew themselves about 3 inches above the ground he covers about 2 inches of them, in 8 or 10 days, or when the tops are about 6 inches high, he spreads the tops open, and hoes and covers them again to about 2 inches, and when grown up again to about 6 inches, he hoes and covers them as before. By this process he thinks it possible that 1000 bushels may be raised from one acre of ground.

His method for raising of corn, is

He has a machine that crosses the ridges, he plants 3 to a hill, the ridges or hills are about 2 feet 6 inches apart. He succours after the second ploughing—he cuts the stalk and blades together close to the ground. The average product is 4½ ears to a hill, the corn weighs 60 to 62 lbs. to the bushel.

His general method of farming is to lay off his land into lots of 6 to 10 acres, each lot is manured once in four or five years; his usual quantity is 8 wagon loads with 4 horses to each acre—first year is in grass—second in corn—third in barley—fourth in wheat, spring or winter wheat, with clover and timothy, 5 lbs. clover and 2 quarts timothy per acre, the northern or late clover he prefers—he mows his timothy for two years, pastures it one year, in the fourth year he turns down the sod, puts in wheat on the sod—1st and 2d corn, 3d barley or spring or winter wheat, and stocks it down as before.

Mr Slemson remarked, he has a field used as pasture, and what he intends turning down the sod, roll it well, give it a top dressing of manure, plough it the second time on the sod, manure it again, put it into wheat, harrow it in, and expects to make 35 to 40 bushels per acre.

The following is his product from 100 acres as reported from actual survey and examination.

10 acres having 400 apple trees on them, produced 25 tons hay—8 acres corn 560 bushels—8 acres do. 720—10 do. do. 300 and 16 tons of hay—4 do. wheat, 140 bushels—1 do. flax, 600 lbs.—8 do. oats, 560 bushels—8 do. hay, 32 tons—8 do. do. 36 do.—1 do. barley, 60 bushels—3 do. hay, 10½ tons—4 do. do. 12 do.—8 do do. 24 do.—2 acres 1000 bushels potatoes—2 acres in vegetables, which also raised 400 chickens.

☞ His wheat cost him 30 cents per bushel—corn 15 do. do.

FOR THE AMERICAN FARMER.

THE ROLLER ;

ITS USE AND IMPORTANCE.

Mr. Skineer,

Looking accidently into the Encyclopedia Britanica, at the article Agriculture, I found the annexed passage, which you may think deserves to be inserted in your paper, as I do myself, because we suffer in this part of the country, from frequent droughts, and the relief alluded to in this article is not generally known, though certainly no recent invention or discovery.*

Your obedient serv't,
THOMAS W. GRIFFITH.

The roller is an instrument of capital use in husbandry, though scarcely known in ordinary practice.——"In the first place, rolling renders a loose soil more compact and solid ; which encourages the growth of plants, by making the earth clap close to every part of every root. Nor need we be afraid of rendering the soil too compact; for no roller that can be drawn by two or four horses will have that effect. In the next place ROLLING KEEPS IN THE MOISTURE, AND HINDERS DROUGHT TO PENETRATE. This effect is of great moment. In a dry season it may make the difference of a good crop or no crop, especially where the soil is light."

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* *Allow me to take this opportunity to recommend to all road makers, the use of an instrument of the kind alluded to, that is, a* roller, *to press down the materials employed in making roads*, before the same is travelled—*a practice which was successfully adopted, on my suggestion, by the President and managers of the Turnpike from Baltimore towards York in Pennsylvania some years ago.*

THE FARMER.

BALTIMORE, FRIDAY, SEPTEMBER 27, 1822.

PRICES OF COUNTRY PRODUCE.

Corn is down again to 64 cents—Red Wheat, from $1 20 to $1 30—White Wheat, fit for family flour has sold for $1 45—Ohio tobacco has sold for $12 50.—The agent through whom the prices of country produce are collected, being indisposed, we are compelled to omit other articles—we find the following in the shape of a postcript, in this day's National Intelligencer—we further learn that Mr. Murdock of London, well known in Maryland, writes of Tobacco, that it is "plenty every where, and in demand no where."

POSTCRIPT.

TO THE EDITORS—Norfolk, September 23.

"Letters from Liverpool of the 9th and 10th of August, received by the Philip Tabb, states, that the prices of Tobacco have not been so low for two years as at the time above mentioned.—The following is an extract of one in particular—'100 hhds. of fair to good Kentucky tobacco, and 30 hhds. of ordinary Virginia, just imported from Philadelphia, were sold, in a lot, two days since, at $27 16 cents. This will not produce more than $3 25 cents to the shipper and the exchange.

"Cotton continues very low, and is rather declining at 7¾d. to 8¼d. for fair to good fair. Upland ordinary goes at 7d. and fine sometimes as high as 9d."

PUBLISHED BY JOHN S. SKINNER.
Printed by J. Robinson.

HORTICULTURE.

POMARIUM BRITANNICUM,

An Historical and Botanical account of Fruits, known in Great Britain, by Henry Philips, —Second Edition.

(Continued from page 205.)

HAZEL.—CORYLUS;
OR NUT-TREE,

In Botany, a Genus of the Monœcia Polyandria Class.

The common hazel-nut is found growing wild in most parts of Europe, as also in every part of England. It is never cultivated for the sake of the nut, which is considered unwholesome, being hard of digestion, and causing shortness of breath and wheezing. Many young people have suffered by eating too freely of this fruit; and it has caused the death of several who have taken immoderately of it.

The pleasure of nutting parties is well known in this country, and much enjoyed by the rustics: it is thus beautifully described by Thomson:

Ye swains, now hasten to the hazel bank,
Where down yon dale the wildly winding brook
Falls hoarse from steep to steep. In close array,
Fit for the thickets and the tangling shrub,
Ye virgins, come. For you their latest song
The woodlands raise; the clustering nuts for you
The lover finds amid the secret shade;
And where they burnish on the topmost bough,
With active vigour crushes down the tree;
Or shakes them ripe, from the resigning husk,
A glossy shower.

These nuts are not much used in medicine, but the cream of them is good for the stone, and heat of urine; emulsions made of them with mead, are recommended for old dry coughs.

Quercentan gave a drachm of the powder of nut-shells, mixed with an equal quantity of prepared coral, in a glass of the water of carduus benedictus, or corn poppy, in the pleurisy.

The wood of the hazel-tree is used for making hoops for casks, hurdles, crates, springles to fasten down thatch, fishing rods. &c.; it is also burnt for charcoal; and in the country where yeast is scarce, they twist the slender branches of hazel together, and steep them in ale yeast during its fermentation: they are then hung up to dry, and at the next brewing are put into the wort instead of yeast.

JUNIPER.—JUNIPERUS.

In Botany, a Genus of the Diæcia Monadelphia Class. Natural Order; Coniferæ.

The earliest mention of the juniper-tree will be found in the first book of Kings, about 906 years before the Christian era, when the prophet Elijah took refuge in the wilderness of Beersheba, to avoid the persecution of King Ahab. "He went a day's journey into the wilderness, and came and sat down under a juniper-tree: And as he lay and slept under a juniper-tree, behold then an angel touched him, and said unto him, Arise and eat."

The juniper is also a native of most of the cold mountainous parts of Europe. Gerard says, "The common juniper-tree grows, in some parts of Kent, unto the bigness and stature of a fair great tree." It is found growing wild in considerable quantities on many parts of the Sussex and Surrey hills, from whence it is often transplanted into shrubberies. Being of a bluish evergreen, it contrasts well with the laurel and other shrubs of that nature. The flowers are herbaceous, and, if viewed with a microscope, would be found a most beautiful model, either for the jeweller, or the ornamental sculptor.

Juniper berries, used by distillers to flavour their gin, are principally brought from Holland and Italy. These berries are carminative; but their most remarkable properties are, in scouring the viscera, and particularly the reins and urinary passages, for which reason they are of great service in asthmas, cachexies, the jaundice, colic, the stone of the bladder and kidneys, as also crudities of the stomach. The oil of juniper berries is a very stimulating diuretic: the decoction, inspisated to the consistency of a rob, or extract, has a pleasant, balsamic, sweet taste. This extract may be used with advantage, as in catarrhs, debility of the stomach and intestines, and difficulties of the urinary excretions, in persons of advanced age.

Etmuller had a vast opinion of juniper berries. The rob, made of the expressed juice of the green berries, has been called by many *theriaca Germanorum*, so much are they esteemed by that nation for their alexipharmic qualities. In many parts of Germany, they are used as a culinary spice, and the flavour of these berries is esteemed in their sauer kraut. The heathcock of Germany is not eatable in the autumn, being so strongly flavoured with juniper berries, on which this bird feeds. The wood of this shrub is also of use in physic, as it strengthens the stomach, clears the lungs, removes obstructions of the viscera, and is further said to be sudorific, cephalic, and hysteric. So much is the flavour of the berries admired by the lower order of the inhabitants of the metropolis, that it would be difficult to name any complaint, that they would not be afflictedwith, for the sake of a plentiful supply of this cordial.

In Sweden, the juniper-berries are made into a conserve, and eaten at breakfast. The Swedes also prepare a beverage from them, which they consider useful as a medicine. In some places they are roasted, and used as a substitute, for coffee.

Gerard says, in his 3d book, "Divers in Bohemia do take, instead of other drinke, the water wherein these berries have been steeped, who live in wonderful good health."

The wood of the juniper-tree is very hard, beautifully veined, susceptible of a very high polish, and is admired, when used as veneering for cabinet furniture, being fragrant, and of a yellow colour. Pliny says, "the juniper has the same properties as the cedar," adding, "that it grew in Spain to a great size, but that wherever it grows, the heart is found more sound than cedar." It has been said, that a coal of juniper wood, covered with ashes of the same kind, will keep on fire a whole year.

LEMON.—LIMON.—CITRUS.

In Botany, of the Class Polyadelphia Icosandria; Natural Order, Bicornes.

This fruit derives its name from the Greek word γειμών, which signifies *a meadow*, because the leaves and the fruit, before they are ripe, are of the colour of a spring meadow.

The lemon and the citron-tree are natives of Asia, from whence they were brought into Greece and Italy. They appear to have been well known to the Romans in the days of Pliny, although they had failed in the cultivation of them, as that author informs us in his 13th book, chap. iii., where he says, speaking of foreign trees, "I will begin with that, which is of all others the most wholesome, the citron-tree, called the Assyrian-tree, and by some the Median-apple: the fruit is a counterpoison, and singular antidote against all venom; the leaves," he says, "are like the arbutus, and it hath thorns." "The pome citron," he continues, "is not good to be eaten as a fruit, but is very odoriferous, as are the leaves, which are used to be put in wardrobes among apparel, to give a perfume, and to keep off moths and spiders." "This tree," he adds, "bears fruit at all times of the year, for when some fall, others begin to mellow, and some to blossom. Many have tried to transplant the trees into their own country; and for this purpose they have had pots made, and enclosed them well with earth; but for all the care and pains taken about them, to make these trees grow in other countries, yet would they not forget Media and Persia, and liking no other soil, would soon die.

Virgil, in his Second Georgic, has elegantly described this fruit, and it's supposed medical powers against spells and poison.

Media fert tristes succos tardumque saporem
Felicis mali: quo non præsentius ullum
(Pocula si quando sœvæ infecere novercæ
Miscueruntque herbas, et non innoxia verba)
Auxilium venit, ac membris agit atra venena.
Ipsa ingens arbos, faciemque simillima lauro:
Et si non alium late jactaret odorem,
Laurus erat: folia haud ullis labentia ventis:
Flos apprime tenax: animas et olentia Medi
Ora fovent illo, et senibus medicantur anhelis.

Sharp tasted citron Median climes produce,
Bitter the rind, but gen'rous is the juice;
A cordial fruit, a present antidote
Against the direful stepdame's deadly draught,
Who, mixing wicked weeds with words impure,
The fate of envied orphans would procure.
Large is the plant, and like a laurel grows,
And, did it not a diff'rent scent disclose,
A laurel 'twere: the fragrant flow'rs contemn
The stormy winds, tenacious of their stem;
With this, the Medes to lab'ring age bequeath
New lungs, and cure the sourness of the breath.
Dryden.

The lemon-tree appears to have been cultivated in this country as early as the reign of James the First, as Lord Bacon mentions the housing of hot country plants, as lemons, oranges, and myrtles, to save them.

In some parts of Devonshire, lemon-trees are trained to the walls, and require no other care than to cover them with straw or mats during the winter. Earl Paulet presented some of these lemons to his late Majesty upwards of forty years ago, which grew in the garden of his sister, Lady Bridget Bastard, of Garston. The lemon-tree is of a much hardier nature than the orange; it is therefore brought to greater perfection in this country than the latter fruit. Lemons have long been propagated with success in Italy, Spain, Portugal, and the South of France, as well as in the West-India islands. The lemons of St. Helena are the most esteemed, growing larger, and of a milder flower than other kinds.

This fruit is now become almost necessary in culinary purposes, as well as being an article of luxury in a variety of shapes: it makes an excellent sweetmeat when cleared of it's pulp, and prepared with clarified syrup. Lemonade and lemon ices are as well known in the present day as punch was in the last age. The yellow peel of the lemon is an agreeable aromatic; and, in cold phlegmatic constitutions, it proves an excellent stomachic and carminative, warming the habit and strengthening the tone of the viscera.

Lemons are cooling and grateful to the stomach, allaying thirst, increasing appetite, and are useful in fevers, even malignant and pestilential. The juice, mixed with salt of wormwood, is an excellent medicine to stop vomiting, and to strengthen the stomach. The efficacy of lemon-juice in preventing the sea-scurvy, has long been recommended. Sir James Lancaster, in his voyage in 1601, carried with him several bottles of lemon-juice, and, by giving his sailors a few tablespoons-full in the morning kept off this disorder.

In Captain Cook's voyages, great benefit was derived from lemon and orange-juice, which were found in the sea-scurvy to be very efficacious.

Dr. Willich states, that the largest dose of opium may be checked in it's narcotic effects, if a proper quantity of citric acid be taken with it; and that, with this adjunct, it induces cheerfulness instead of stupefaction, and is succeeded by gentle and refreshing sleep.

In Sicily, the juice of lemons forms an important article of commerce, it being considered the most valuable remedy for the scurvy in long voyages. It is also very extensively used by calico-printers, as a discharger of colour, to produce, with more clearness and effect, the white figured parts of coloured patterns, dyed with colours formed from iron.

When Gibraltar was besieged or blocked up in the autumn of 1780, vegetables had become so scare, that a small cabbage sold for 5*s.* which caused the scurvy to rage to such a degree as threatened more fatal consequences than the gun-boats of the Spaniards. The women and children, as well as the officers, were equally affected with this dreadful disorder, when happily an antidote was procured by the capture of a Danish dogger, from Malaga, laden with lemons and oranges, which the governor immediately purchased for the use of the garrison, and distributed among them, which relieved them most wonderfully. The juice was given to those in the malignant state diluted with sugar, wine, or spirits. Various antiscorbutics had previously been used without success, such as acid of vitriol, sauer kraut, extract of malt, essence of spruce, &c.

As the juice of lemons and limes became in so much demand for medical use, as well as for the purposes of luxury, various modes of purifying and preserving it have been adopted by our ingenious chemists, who have succeeded in procuring the acid in a state of purity in crystals. The liquor called *shrub*, is made with lemon and lime-juice added to rum.

The fruit of the lime *(lima)* resembles in acidity the lemon; and the tree, that of the orange, having winged leaves. It is much smaller than the *common* lemon, and is principally brought to this country from the West-India islands, where, says Lunan, "the negroes take the young fruit, soon after it is formed, or when about the size of a small hazel-nut, pare off the rind, which they beat into a fine pulp, and with a hair-pencil apply it carefully to the lids of sore eyes for a cure. It is supposed," continues Lunan, "this rawness of the eyelids, accompanied with a humour, is generally caused by worms which lodge in it, and that this application destroys them."

Lime punch is more esteemed than that made from lemons, particularly for cold punch, which is a beverage greatly esteemed by turtle eaters.

The citron is principally used as a sweetmeat.

The shaddock-tree: *Aurantium Fructu maximo Indiæ Orientalis.*

This fruit is also a species of the *citrus*, and takes its name from Captain Shaddock, who first brought it from the East Indies, where it is a native. It is now cultivated in the West Indies, where the fruit often grows to the size of twenty inches in circumference, and is known to yield near half a pint of clear juice. It is described in the Hortus Jamaicensis as being often larger than a man's head. Shaddocks are preserved as a sweetmeat, and used in making punch, as well as limes and lemons.

LOCUST-TREE.—HYMENÆA.

In Botany, of the Class Decandria Monogynia. Natural Order, Lomentaceæ.

This is a very large spreading tree, in shape resembling the beech. The flowers are produced in loose spikes at the end of the branches, and are succeeded by thick, fleshy, brown pods, shaped like those of the garden-bean, about six inches long, and two and a half broad, wherein there are three or four round, flat, blackish beans or stones, bigger than those of the tamarind, enclosed in a whitish substance of fine filaments, as sweet as sugar or honey. The wild bees are fond of building their nests in these trees: we may therefore justly conclude that St. John found both the locust and wild honey on the same trees, and that it was this fruit on which he fed, and not on insects, called locusts, as some authors have stated.

The Indians eat this fruit with great avidity, though it is apt to purge when fresh gathered, but loses that quality as it grows older.

The juice, or decoction of the leaves, is carminative, and eases the colic pain. The inward bark destroys worms. Between the principal roots of the tree exudes a fine transparent resin, which is collected in large lumps, is called gum animi, and makes the finest varnish that is known, superior even to the Chinese lacca.

The tree is now well known in the West Indies, and when old, the timber is in request to make wheel-work for various machines.

As this tree is made interesting to us by the mention made of it in scripture, I shall be excused in giving some particulars from the Botanical Manuscript of Mr. Anthony Robinson, who writes thus:—

"On the 8th July, 1759, I had the pleasure of seeing the perfect flower of the hymenæa of Linnæus expanded, from which I took this description: the receptacle of the cup was bell-shaped, permanent; the perianth consisted of four ovate, coriaceous, thick leaves, almost equal, placed scalewise, which, for the most part, dropped as soon as the petals were expanded. The leaves of the cup were placed on the margin of the receptacle. The petals were white, five in number ovate, erect, patent, and almost equal, as long as the cup; the stamina were ten subulated, erect, patent filaments, one fourth longer than the petals; the germen was placed on a receptacle, arising out of a hole in the centre of the receptacle, compressed and small; the style subulate, and somewhat longer than the stamens; the stigma coronated; the anthers were large, oblong, and the flower, has nothing of a pyramid in it's form. There was great difficulty in getting a complete flowers, for the leaves of the cup dropped off with the least motion. The petals were considerably permanent, but the stamens more so. Linnæus has described the blossoms erroneously." This tree was first cultivated in England, in the yer 1688.—*(Hortus Kewensis.)*

LOVE-APPLE.—SOLANUM;

OR, TOMATO-BERRY.

In Botany, a Genus of the Pentandria Monogynia Class. Natural Order, Luridæ.

The love-apple, or tomato, is the fruit of the lycopersion, an herbaceous branching plant, or vine, with a hairy stem, and a rank smell.

It is a native of South America, and in all probability of Mexico; from whence it appears to have been brought by the Spaniards, who, as Barham observes, use them in their sauces and gravies; because the juice, as they say, is as good as any gravy, and so by its richness warms the blood.

Dodoens, in his Pemptades, published at Antwerp, in 1583, describes it as growing at that time in the continental gardens, and says, that it's fruit was eaten dressed with pepper, salt, and oil.

Parkinson, whose works were published in 1656, mentions it as being cultivated in England for ornament and curiosity only. Even at the present time they are grown in many gardens in the country, merely for the singularity of their appearance, varying very much in size and shape as well as colour; some being of a bright yellow, and others of a fine red. It appears, by the Hortus Kewensis, to have been cultivated in England as early as the year 1596; but I conclude it was introduced several years previous to that date, as Gerard mentions it in the early part of his voluminous work, as growing in his garden. This author calls it *pomum amoris*; and says, "apples of love do growe in Spaine, Italie, and such hot countries, from whence myself have received seedes for my garden, where they do increase and prosper."

"There hath happened unto my handes another sort," says this author, "agreeing very notablie with the former, onely the fruite hereof was yellow of colour." (Now this work, which was published in 1597, must have taken some years in compiling and printing, &c. as it contains several thousand wood plates.)

Miller says, in the 6th edition of his Gardener's Dictionary, "the Italians and Spaniards eat love-apples as we do cucumbers, with pepper, oil, and salt, as well as for sauces."

The Portuguese call this fruit *tomato*, and eat it either raw or stewed.

Lunan says of this fruit, "I have eaten five or six raw at a time: they are full of a pulpy juice, and of small seeds, which you swallow with the pulp, and have something of a gravy taste. The juice is cooling, and very proper for defluxions of hot humours in the eyes, which may occasion a glaucoma, if not prevented: they are also good in the St. Anthony's fire, and all inflammations; and a cataplasm of them is very proper for burns." Miller also says, that the love-apple was used as a medicine in his time.

This fruit has long been used by the wealthy Jew families in this country; and within these last few years it has come into great use with all our best cooks, as it possesses in itself an agreeable acid, a very unusual quality in ripe vegetables and which makes it quite distinct from all garden vegetables that are used for culinary purposes in this country. It makes a good pickle, and is preserved in various ways for the winter use, and is made into a kind of ketchup also. When boiled in soups and sauces, it imparts an acid of a most agreeable flavour: it is also served at table boiled or roasted, and sometimes fried with eggs. Love-apples are now to be seen in great abundance at all our vegetable markets, but I do not find that they are used by the middle or lower classes of English families, who have yet to learn the art of improving their dishes with vegetables.

Mr. John Wilmot, of Isleworth, states, that in 1819 he gathered, from 600 plants, 400 half-sieves, which is about equal to 133 bushels, and that he then had many to spare. He adds, that the plants produced from twenty to forty pounds' weight each, and that some of the apples measured twelve inches in circumference.

Mr. Wilmot recommends them to be planted against a bank, as being more congenial to their nature than a wall. There are several varieties of the tomato; and that which produces fruit about the size of a cherry is the most acid, therefore the most desirable kind for private gardens, although not so profitable for market.

MEDLAR.—MESPILUS.

In Botany, a Genus of the Icosandria Pentagynia Class.

This fruit was known to the ancients in Greece, as it is mentioned by one of their authors, Theophrastus, who wrote 300 years, B. C.; but it appears not to have been cultivated in Italy so early, as Pliny states that it was not known in Rome in Cato's days. Pliny mentions three kinds: the Anthedon, the Setanian Medlar, which he describes as the largest and palest in colour, and the Gallicum, or Bastard French Medlar.

Some authors affirm it to have been originally a German fruit; but the name Anthedon was doubtless given to it from it's being brought from a city of that name in Greece, while the last is declared by this author to have been from France: the Setanian seems to have derived it's name from it's growing near the marshes of Setia. It appears also to have been indigenous to this country, as it is mentioned by all our early writers. Tusser calls the fruit Medlers or Meles. Gerard says, "The medlar-tree often-times grows in hedges among briars and brambles: being grafted on a white-thorn, it prospers and produces fruit three times as large as those which are not grafted at all, and almost the size of small apples. We have," says he, "divers sorts of them in our orchards." He mentions the Neapolitan Medlar, with leaves like the hawthorn, and the Dwarf, growing naturally upon the Alps, and hills of Narbonne and Verona.

The Dutch Medlar, which is much larger and finer flavoured than the common sort, is the only kind now in request for planting in the garden or orchard. This fruit cannot be eaten when fresh gathered, being too harsh for the palate; but after it has been laid up for a few weeks, and undergone a putrefactive fermentation, it becomes quite soft, and is an agreeable fruit for the desserts in November and December.

This fruit is cooling, drying, and binding, especially before it is ripe, and is useful in all kinds of fluxes. The *lapilli*, or hard seeds, are accounted good for the stone and gravel; they are an ingredient in the *syrupus myrtinus*. (*Miller's Bot. Off.*)

The medlar-tree is propagated by budding or grafting on the hawthorn, as has been noticed by Phillips:

Men have gather'd from the hawthorn's branch
Large medlars, imitating regal crowns.

It is sometimes grafted on the pear stock, but is more productive by the former mode.

The pruner must observe not to shorten any of the branches, as the fruit is always produced at the extremities of the boughs.

MELON.—MELO.—CUCUMIS.

In Botany, a Genus of the Monœcia Sygenesia Class. Natural Order, Cucurbitaceæ.

The melon most esteemed, in every part of Europe, is the Cantaleupe, which takes it's name from a town so called, about fifteen miles from Rome, where it has been cultivated since the Mithridatic war, being one of the fruits brought from Armenia by Lucullus. It grows, says Miller, in that part of Armenia, which borders on Persia, in such plenty, that a horse-load is sold for a French crown. The flesh of this melon, when in perfection, is delicious, and does not offend the most tender stomach, but may be eaten with safety. The outer coat of this melon is full of knobs and protuberances like warts; it is of a middle size, rather round than long; that with an orange-coloured flesh is best.

The Musk Melon appears to be a native of Tartary, where it is found growing wild. It has lately been found in great abundance on the sandy plains in the neighbourhood of Jeypoor.—This kind of melon has long been cultivated in Italy, from whence I conclude it was brought to England, as it was first introduced into this country in the year that Henry the Eighth received the title of "Defender of the Faith," A. D. 1520: and from Gerard's account it appears to have been nearly confined to the Royal Gardens: he had not grown it himself, but says, "They delight in hot regions, notwithstanding I have seen, at the Queen's house at St. James's, very many of this sort ripe, through the diligent and curious nourishing of them by a skilful gentleman, the keeper of the said house, called Master Fovvle; and in other places neere unto the Right Honourable, the Lord of Sussex house, of Bermondsey, by London, where from yeere to yeere there is verie great plenty, especially if the weather be any thing temperate." "It hath," adds Geraad, "the smell of musk and from which account it is called the Musk Melon."

It is stated in Gough's British Topography, that melons were common in this country as early as the time of Edward the Third, but were entirely lost, as well as the cucumber, during the wars of York and Lancaster.

Miller justly remarks, that, in this country, there are too many melons produced of no value by those who supply the market, who endeavouring to enlarge their size, render the fruit of no value, and unworthy the trouble and expense, being more fit for the dunghill than the table. In warmer countries, the melon is raised with little or no trouble, and the fruit attains a peculiar fine flavour; but in this climate it requires great attention and expense to rear it, therefore—

Grugde not, ye rich, (since luxury must have
His dainties, and the world's more numerous half
Lives by contriving delicacies for you,)
Grudge not the cost. Ye little know the cares,
The vigilance, the labour, and the skill,
That day and night are exercised, and hang
Upon the ticklish balance of suspense,
That ye may garnish your profuse regales
With summer fruits brought forth by wintry suns:
Ten thousand dangers lie in wait to thwart
The process.

Cowper.

No country has a greater variety of melons than England, yet it is so rare to find them good in the market, that the demand for them in London, compared to that in Paris, cannot be more than the proportion of one to a thousand.

I have observed, in other parts of this work, that the French have particular places where they cultivate peculiar fruits only: this is the case with melons, and where they are grown in such abundance as entirely to occupy the attention of whole villages, the culture must necessarily be better understood than in our gardens, where the same persons have to cultivate every kind of fruit or vegetable: the mind being thus divided between so many varieties, that none can be so thoroughly understood. Another great disadvantage arises in the common mode of growing melons in this country; that is, by planting them near to cucumbers, and sometimes quite surrounded by them, and often by gourds, which, it is well known, will, by their incestuous intercourse, not only affect the seeds for future plants, but change the nature of the fruit, which has been polluted by the farina of other species of the *cucurbitaceæ*.

When a melon is perfectly fine, it is full without any vacuity: this is known by knocking upon it; and, when, cut, the flesh should be dry, no water running out, only a little dew, which should be of a fine red colour. This fruit is principally used at desserts in England, and eaten with sugar, ginger, pepper or salt, agreeable to the taste, while in France it is chiefly served up at dinner, as a sauce for boiled meats. Miller says, "the seeds should not be sown before they are three years old, but not older than six;" although we read, in the Philosophical Transactions, of melons being raised from seeds that were forty-three years old. Melon-seeds are cooling and diuretic: they are anodyne; and were formerly used to take off stranguries occasioned by blisters; but sweet almonds are now preferred.

Pliny writes, that "melons, being eaten as meat, cool the body, and make it soluble: the fleshy substance of them applied to the eyes assuage pain, and restraineth the waterish and rheumatic flux. The root heals wens or ulcers; and being dried, stops vomits:" it was also used by the Romans in washing-balls and soap, as a good scourer.

The water-melon, or *cucurbita citullus*, is a fruit greatly appreciated in Egypt, China, the East Indies, and other hot climates, where it is cultivated to a great extent on account of it's grateful coolness and delicious flavour; and the flesh of it is so succulent, that it melts in the mouth and its central pulp is fluid, like the cocoa-nut, and may be sucked, or poured out, through a hole in the rind, which is a most refreshing beverage to the inhabitants of warm countries.

In some parts of Upper Egypt, whole districts are covered with water-melons. They are sown in the sand, on the banks of rivers; and it is in this situation, where the burning heat co-operates with the freshness of the water, which moistens the stalks, that this fruit acquires its agreeable pulp. The Egyptains esteem it equally wholesome and agreeable. Sonnini says, their own melons are not so good as those grown in Europe.

The water-melon is allowed to be eaten in fevers and inflammatory complaints. One kind of the water-melon is pickled like gherkins, and much used by the French cooks in their fricassees; and they are sometimes baked in sweet wine. Gerard mentions, that the surgeons who belonged to the fleet, brought home many kinds of melons and pompions from the shores of the Mediterranean sea; but they could not have been ripened well in this country, before glasses were used for that purpose; and Parkinson seems to have been the earliest English author, who gives directions for making hot beds for melons, and covering them with bell glasses, which was in 1629.

Madame de Genlis relates, that, "the master of Lockman, the famous fabulist, who was a slave, having given a him a bitter melon, was astonished to see him eat the whole of it; and, on naming his surprise, received this answer; 'I have experienced so many benefits from you,' said Lockman, 'that it cannot be strange that I should have eaten without complaint the first bitter fruit which you ever presented me with.'—This answer so affected his master, that he gave Lockman his liberty."

(*To be continued.*)

Selections from late numbers of the London Farmers' Journal, received at the office of the American Farmer.

SIR JOHN SINCLAIR, on a remedy against the Smut, and a means of strengthening crops of Wheat against other disorders to which they are liable.

Thurso Castle, North Britain,
September 5, 1821.

SIR,

The remedy against "*The Smut,*" namely "*The Sulphate of Copper,*" or "*Blue Vitriol,*" is likely not only to prevent the smut, but also other disorders to which wheat is liable. I was informed on the Continent, that it was an antidote to the mildew, but I did not wish to raise too high the expectations of the public respecting this most effectual remedy against smut, by representing it to be a general specific. In a letter, however, from Mr. Richard Hipkiss of Birmingham, dated the 20th of August, 1821, there is the following paragraph: "I am happy, *very happy*, to have it in my power to confirm, by another year's experience, all that you have said, relative to the use of the sulphate of copper, as an antidote to the smut; the wheat around me, is much diseased; mine is free, no smut, *no mildew*, and but little, very little of the red mould."

Mr. Hipkiss, however, states, that his experiments regarding the use of the sulphate, are of little value, when placed in competition with those of a friend and neighbour of his, who has unfortunately the greatest reluctance to give his experiments to the world, under the sanction of his name. The results however are *decisive*, at which the following experiments furnish complete proof.

Having taken a quantity of Wheat of two kinds, the red Lammas, and a white wheat, called the velvet white, with these he mixed a portion of the powder of smut. After suffering them to remain together for 13 days, he sowed one part of each, without subjecting it to any preparation. The produce of the Lammas wheat is more than two-thirds smut; the white wheat, with the exception of one ear, *is all smut.* The remaining quantity he steeped before sowing with the preparation of blue vitriol, for various periods of time, of from one hour to several hours. In the Lammas wheat, steeped for one hour, there is one head of smut, in all the others not one particle. I am thence induced to rely, with (if possible) *increased confidence*, in the security given to the wheat crop by the aid of this *invaluable specific*; for neither my friend who tried these experiments, nor myself, have any smut in our crops, although it is this year so very prevalent in a field adjoining to one of my own, that I speak within bounds when I say, one sixth part of the entire crop is smut, and in most of the fields around me there is more or less, and in all either mildew or red gum *to a great extent*. Of the mildew *I have none*, of the red gum so little, as not to be worth notice. It cannot be chance that has thus secured us, whilst others are suffering severely."

The following is the simplest mode of applying this important remedy:—After dissolving five pounds weight of the sulphate of copper, or blue vitriol, in *hot* water, add as much cold water as may be sufficient to cover three bushels of wheat. Let the wheat be gradually passed through a riddle, in order that all the light grains may swim on the surface, and be skimmed off. Stir the wheat repeatedly, that it may be effectually cleared of all the light grains. Let the wheat continue in the liquid for five or six hours, or it may remain even longer, without risk. It should then be taken out, and thrown upon the floor. It is to be sown broad-cast, it should be crusted with lime in the usual way; but if intended for drilling, it should be stirred about, for five or six hours in *dry* weather, or double that time in *moist*; or by the use of a fanner, it will soon become perfectly dry. It may then be drilled with as much facility, as grain that had not undergone any operation.

After from six to nine bushels have passed through this operation, then add one pound of the sulphate, for every three bushels, until thirty bushels have been used, when the liquor has probably become so foul or turbid, that a fresh quantity of the preparation should be made ready.

The advantages to be derived from the use of this specific are very great. 1. The expense is but trifling, the price of blue vitriol not exceeding from 6d. to 8d. or 10d. per pound. Five pounds will be sufficient for nine bushels, or from 6d. to 10d. or 1s. per acre, according to the price of the vitriol, and the quantity of seed sown; and after being used, the water may be evaporated, and the remains of the sulphate will again chrystalise. 2. Liming is not necessary, and in many places lime recently slacked cannot be had. 3. The grain may afterwards be kept with safety for sometime. 4. The plant is so strengthened, that it is less liable to be lodged, or to suffer from other disorders besides smut; and 5. This plan is much superior, in point or cleanliness, to those disgusting processes that are usually recommended for the same purpose.

ON PREVENTING SMUT.

Hunton, October 5th, 1821.

SIR,

Much has lately been written by respectable correspondents, and particularly Sir John Sinclair, in your Journal, giving various receipts to prevent the Smut and Mildew in Wheat: these, no doubt, are in many cases efficacious; yet, Sir, I venture to suggest, that if wheat were sown earlier, and clean dry old seed, we should hear little of Smut or Mildew. Of late years regular summer fallows have gone out of fashion, and green crops having been substituted, the wheat seed-time has been much protracted, besides, generally new and often damp seed has been sown; these, I have no doubt, are causes of Smut and Mildew, and hence the yearly increasing prevalence of those diseases in the grain. Allow me to say, from my own humble experience for fifteen years, that invariably old dry wheat, sown before October, has been free from Smut and Mildew, while the new wheat sown after that time has generally been more or less affected with those ruinous diseases. No two things, in my opinion, conduce so much to a good clean crop of wheat as a proper summer fallow, and old seed sown early. I find that I can grow more grain, and of a superior quality, from a good fallow and early sown old wheat, than with an additional coat of manure, and consequently nearly double the quantity of straw, if sown with new seed, and so late as November, even if the latter escape Smut and Mildew, which I find it never entirely does on my land. Still, however, from the superior value of a wheat crop, I am tempted to sow a few acres of turnip land, I mean turnips fed and folded by sheep, with wheat after old Michaelmas, and this season I intend sowing old grain. Should it prove affected with Smut or Mildew, in future I may try some of the steeps recommended in your Journal. I am of opinion that all kinds of land would be better sown by the middle of October, varying the quantity of seed (the cleanest and dryest old wheat,) from two bushels to four, according to the quality and condition of the soil; the lightest and dryest soils to be sown thickest and earliest, and if possible with most rain, and trod firm with sheep, being first tilled fine; the strong and heavier soils to be left rather cloddy, and not trodden or closened by rolling or treading until the spring.

I hope that I shall not be censured in adding, that these few observations are not the result of mere theory but of actual experience, excepting so far as relates to the very best soils, which I have not had the good fortune to cultivate.

I remain, Sir,
Respectfully your's
ROBERT PITTER.

FROM THE VIRGINIA HERALD.

Fredericksburg, July 17, 1822.

AGRICULTURAL SOCIETY.

An adjourned meeting of the Society was held at the Indian Queen Tavern, on the 4th instant. The subject of the Agricultural Fair alone occupied their attention. The following scheme is the result.

We are gratified in seeing the proposition assuming this definite shape. The experience of all countries where these Fairs have been held, has demonstrated their good effects upon the agricultural character of the community. We believe also, that the one now under consideration, will benefit the business of this town. We therefore hope to see it respectably attended for the sake of both town and country.

To the Agriculturists of Virginia.

In submitting to their agricultural Brethren the following scheme for an annual agricultural Show and Fair at Fredericksburg, the members of the Fredericksburg Agricultural Society, beg leave most earnestly to invite their co-operation; in the full confidence that they can do nothing better calculated to promote the general interests of the landed proprietors and cultivators throughout all that portion of our country sufficiently near to Fredericksburg to participate in such a plan.—The benefits which have been diffused by similar institutions wherever they have been established, are so obviously great and extensive, that no argument is any longer necessary to demonstrate them. The practical advantages speak for themselves. All which seems requisite to our undertaking is, so far to overcome that false pride which checks effort by inspiring the fear of failure, as to make a beginning. It would be absurd to expect from a first attempt, that full success which results from similar exhibitions well matured by frequent recurrence. Let us *once* commence, and we feel well assured that no future persuasions will be required to encourage the plan hereafter. In no other way can the agriculturists, connected with Fredericksburg, (to borrow a familiar phrase,) "kill so many birds with one Stone." For they may combine business with amusement, and profit with pleasure in a more compendious way on such an occasion, than on any other of a public nature which is likely to present itself. Friends and acquaintance from the remote parts of the contiguous counties may here conveniently meet to renew and to strengthen the social ties by which they are connected; and to rub off a little of that country rust of eccentric habits, awkward manners, ridiculous, and sometimes revolting peculiarities, which all men are liable to contract by uninterrupted retirement from the busy haunts of their fellow men. It is at such places as Agricultural Shows and Fairs, that sales and purchases of stock, of all kinds—pleasure horses, working cattle, farming implements, crops, and merchandize, might be made to more advantage probabably than they could at any other time. And the general excitement to enterprise and improvement, in all the various branches of rural economy, produced by these public competitions for excellence in husbandry, cannot fail to exercise a most beneficent influence on the whole landed interest of our country. Without some such stimulus to the languid—and we may almost say *torpid* feelings of our agricultural people, we must continue, to the end of time, nearly a century behind our brethren of the north and east, in all those arts which contribute to embellish and adorn the fair face of our beloved country; and to render its soil productive of the necessaries, the comforts, and the luxuries of life.

The plan is as follows:

That an Agricultural Show and Fair shall annually be held at Fredericksburg, in the month of November; and that the first shall take place on the second Wednesday in November next, being the 13th day of the month. It shall continue for two successive days—on the first of which, Stock of various kinds shall be exhibited; and on the second, Agricultural Implements.

The Society shall appoint a Committee of Premiums to consist of ten Members—five to constitute a Committee on Stock, and five on Agricultural Implements; and these joint Committees shall possess the discretionary power to award premiums for any unspecified article, which they may deem particularly well calculated to promote the objects of the Society.

There shall be a Committee of Arrangement, consisting of three Members, whose duty it shall be to contract for the erection of suitable stalls and pens, for the temporary confinement of the Stock offered for Premiums.

All candidates for Premiums shall enter with the Committee of Premiums, by 10 o'clock, on the first day, the animal, or implement designed to be offered. At 12 o'clock, the Committee will proceed to examine the merits of the articles; and their determination will be publicly announced by the President, on the second day; immediately after which, the Premiums will be distributed. The candidates, in all cases, except where discretionary Premiums are given, must be inhabitants of counties wherein some member or members of the Society may reside; and they must be the owners in the case of Stock, and the inventors or improvers in the case of the Implements exhibited.

The Premiums shall consist, in every instance, either of a medal, of a certain value, or of some article of plate.

The following regular Premiums shall be offered:

1st. Some description of Plate, worth $30, for the best Stallion.

2d. $25 for the best Mare: fitness for the draft and saddle—to be the test of merit in both these cases.

3d. $25 for the best Bull.

4th. $20 for the best Cow—considering excellence of form, rather than largeness of size, as the most valuable quality.

5th. $15 for the best Ram; the qualities chiefly to be considered, such a form as indicates a peculiar propensity to fatten, and to produce a quantity of wool.

6th. $15 for the best Boar or Sow.

7th. $15 for the best Plough, for two or more horses—easiness of draft, next to the depth and width of furrow, to be considered the first recommendation, and this to be ascertained by the Dynanometer.

8th. $15 for the best fixed Horse-Cart.

9th. $15 for the best contrived Wheat Fan.

10th. $15 for the best contrived Harrow for general purposes.

11th. $10 for the best contrived Scythe-Cradle.

12th. $20 for the best Beef—$15 for the best Veal—$10 for the best Mutton, fattened in the shortest time, and most economical manner; of which fact, certificates will be required from the candidates, briefly stating their respective processes.

No patented Implement to be offered for a Premium.

Published by order:
WM. F. GRAY, *Sec'ry.*

* * *

☞ The following commentaries of Gideon Davis, were received, and put on file in the Editor's absence; it being by the Printer, well known that we have an especial aversion to every thing which in any degree smacks of political or personal controversy—we have on perusal of his remarks, felt much hesitation in publishing them, and the reasons must be obvious. When the committee of Arrangement in behalf of the Society, have appointed three judges, as they always do, with the utmost impartiality; their award, whatever it may be, when once given in, and received by the Society, ought to be final and conclusive. It is in the power of every one, before the Judges make up their decision, to make every explanation of the subject which may be thought necessary and proper to be considered before their verdict is given in—in the case in question we are quite sure, that Mr. Davis was not denied the opportunity of doing justice to his plough.—It is not our province or wish to say whether the decision by the Committee, be correct or not.—It is enough for us to know that they are *all* esteemed excellent *practical* judges, and that they are all equally incapable of wilful partiality. It will, however, rarely happen that unsuccessful competitors will all be satisfied on such occasions. They may more naturally be suspected of partiality of which they are *not conscious*; and the reason of the hesitation we felt in publishing Mr. Davis' remarks was, that we should thereby open the door, for infinite altercation about the justice of all awards, in every case hereafter. In the mean time we thought it best to submit his observations to the Chairman of the Committee, from whom we received a letter not intended for publication. But as we have now yielded to the reiterated request of Mr. Davis, to let his commentaries appear, we have concluded to put out Commodore Porter's reply, and this according to our judgment will be all that need be said in the case.

To Mr. Davis as a Mechanic of excellent judgment, and honourable industry in the line of his business, we are ready to testify our esteem and good will. All such mechanics, are far more useful and honorable to Society than your rich miserly nabobs, whose sole merit, is in the length of their purse. Those are the *bees*, these the *drones* of the political hive.

Editor American Farmer.

FOR THE AMERICAN FARMER.

By a reference to the report of the Committee on Agricultural Implements, Machines, &c. &c. at the Cattle Show, No. 2, of Maryland, held on the two last days in May last, with a proper explanation, it will be easily understood, that there did a very material mistake occur—in the measurement of the ground, which was ploughed, in testing the ploughs that were entered for premium. By that report it is stated that,

“ After a careful examination of the ploughs
“ in operation, tested by the dynanometer, the
“ Committee have come to the determination
“ that the premium, should be awarded to Mr.
“ William Brown of Brookville, Montgomery
“ county, Maryland—in 32 minutes of time, Mr.
“ Brown's plough went over a space of ground
“ 330 feet long, 21 feet 8 inches wide, running a
“ furrow 1 foot wide and 6 inches deep; carrying a
“ resistance of 500 pounds; price of this plough
“ $15. Mr. Hinks' plough in 32 minutes, went
“ over a space of 330 feet long, 17 feet 3½ inches
“ wide, carrying a furrow of the same width and
“ depth, and having a resistance of 528 pounds;
“ price of plough $14. Mr. Davis' went over a
“ space of the 330 feet long, 19 feet, 6 inches
“ wide, carrying a furrow of the same depth and
“ breadth, in the same time, and having a re-
“ sistance of 500 pounds; price of this plough
“ $14.”—

There can be no doubt, but that the committee intended to give a fair statement of the actual performance of the ploughs; and that it was the desire, and expectation of the whole Society, and that it is surely the expectation of all those that read the report, that were not made acquainted with the circumstance. That the measurement, both of the performance, and draft, were taken in the most exact manner; that is, that Brown's plough did actually in 32 minutes of time, go over 2 feet 2 inches in width and 330 feet in length, more than my plough did in the same space of time, amounting to about 11¼ per cent difference, in the operation, in favour of Brown's plough, which would of course entitle him to the premium, in the opinion of every disinterested person.

But there are some facts relative to this subject, which when explained, will alter the case very much. These facts should have been explained very shortly after the report of the Committee was published, but in consequence of indisposition in my family, I was hindered from going to the ground, to take the exact measurement, until this time, which I have now done, and find the performance to have been thus. (I think it right that it should be understood, that in the commencement, the lands were all laid off 330 feet long and just 20 feet wide, that the ploughmen were then requested to draw their first furrows, which when done, they were then requested to be ready, and at the word given, start and see who could plough out their land first; they did so, and at the expiration of 32 minutes, my plough had finished the land it was placed in; then the ploughs were all stopped. In running the first furrows, some of the ploughmen went considerably crooked, which will account for the difference in the measurement of the performance.)

The measurement was taken in three places, 15 paces from each end and midway; of which we took the average, and found that Brown's land measured from out to out 21 feet 3 inches, that there was left in the middle still to plough 5 feet 8 inches, which makes the quantity ploughed by Brown only 15 feet 7 inches, instead of 21 feet 8 inches, that is 39 per cent more, than he actually ploughed. Hinks' land measured from out to out 16 feet 6 inches, and there was left in the middle still to plough 10 inches, which makes the quantity ploughed by Hinks 15 feet 8 inches instead of 17 feet 3½ inches—the work done by my plough was 17 feet 4½ inches, instead of 19 feet 6 inches, so that by measurement, the operation was thus: Brown 15 feet 7 inches—Hinks, 15 feet 8 inches—Davis, 17 feet 4½ inches—that is, that the operation of my plough, in 32 minutes of time, was worth 11 5 10 per cent. more than the operation of Brown's plough.

By the report of the Committee it is stated, that the ploughs each cut and turned 1 foot wide and 6 inches deep—Brown and Hinks' teams, ploughed each 14 furrows—my team ploughed 16 furrows, so that if we measure by this rule, we shall find that Brown and Hinks ploughed 14 feet each, and that my plough turned 16 feet, that is about 12½ per cent more. There is another subject that those who feel an interest in this matter should be made acquainted with; that is, that one of my horses was not in condition for such an experiment; he was in such condition, that he could not walk as fast as a plough horse should, until he had considerable exercise, in consequence of which, when Brown's and Hinks' teams had each ploughed 4 furrows, my team had ploughed only three; when their teams had ploughed 4 furrows more, that is, 8 furrows each, in all, my team had ploughed 8 furrows also; after that, my team gained, when they had each ploughed 6 furrows more, my team had ploughed eight—so that I do really believe, that if my team had been in proper condition, that my plough instead of performing only 11½ per cent. more than Brown's plough, would have performed upwards of 20 per cent. more.

As it respects the draft, I believe that the dynanometer, or instrument by which that was tried, was not correct. Because, when it was first attached to my plough, the plough run between two and three inches too deep, and was a heavy draft for the team; it was then said to weigh 500 pounds. I then made considerable alteration in the geers, and set the plough at the proper depth about 6 inches, it was still said to weigh about the same; but there must have been a great difference in the draft, I should think at least 50 per cent.

If any should think this statement incorrect, by going on the ground, they may make measurements and satisfy themselves; let it be remembered, that after the expiration of 32 minutes, there was one furrow ploughed on the east side of Hinks' land to finish it, and that there was two furrows ploughed all the way down on the east side of Brown's land, and one chief part of the way, and one furrow on the west side all the way up, and that there still remains about 1 foot 9 inches in the middle to plough.

The above I believe to be a fair statement of the measurement of the performance of the ploughs; how it could have happened, that the two members of the Committee, John Marsh, and Roger Brooke, to whom the measurement of the performance was entrusted, could have been so much mistaken in their measurement, is for them to say, or others to judge, not for me, for I dont know.

This exposition of the case, I believe to be due, not only to myself and family; but to a large portion of the Agricultural community; who have had their attention turned towards my establishment, with an expectation, of there finding some improvements in Implements of husbandry, that might tend to their advantage.

In order to satisfy the enquiry of the thousands who have read that report, and will read this exposition, I think it right for me to give a description of the Brown's plough, for I have no doubt but that the expectations of many are raised considerably, and that they are looking out for something very superior. The Brown's plough is nothing more, nor less, than an old fashioned, (what in this part of the country is called a long) barshare plough, without any other improvement that I know of, except the cast-iron mould board instead of wood. It would be right to say, that this particular plough, had been finished off in a very nice manner; that the share and coulter had been laid with steel, and ground very sharp, and that the moulding part of the plough had been tallowed all over, how much advantage that might be, I cannot say, I have no doubt but it would be some. The committee in their report go on and say. "Those were the only "ploughs fairly in competition, and which came "fully under the observation of the committee— "other ploughs were turned in however, more "for the satisfaction of the owners, than for inspection, and the performance in general was "remarkably fine, and the work in all cases done "with great neatness and expedition. It is due to "Mr. Davis, to say, that his plough is plain and "simple, and of course cheap, and from appearance, not liable to get out of order easily."

Now, to sum up the case, it appears to stand thus; that in the operation my *plough* exceeded Brown's plough 11½ per cent—that his team must have been the best—that in the price my plough is $1 less than the Brown's plough—Now I will appeal to the great Agricultural Society of Maryland whether I am not fairly entitled to the premium offered for the best plough, at their last cattle show and fair.

GIDEON DAVIS.
Manufacturer.

George Town, D. C.
8th mo. 27th 1822.

N. B. These measurements have been taken, by men disinterested, and well qualified for such a task, with whose measurements mine agree.

Friend J. S. SKINNER.

I have also forwarded an extract of a letter that I received from Gen. Thomas Pinckney, President of the Farmers Society of Pendleton County, South Carolina, in which I presume thee will feel some interest. I only extracted what relates to the subject with which thee was acquainted.

Pendleton County, (S. C.)
June 20th, 1822.

GIDEON DAVIS,

Dear Sir,—I am sorry that circumstances have been such as to oblige me to defer answering your letter so long—but we are so remote from a seaport, and the difficulties and length of time required to get your ploughs up to our mountain country, prevented us from giving them a trial till the last meeting of our Farmers Society. I am happy to say the very respectable committee of gentlemen chosen to make a trial of about a dozen different ploughs from New York, Philadelphia, and Baltimore, gave a preference to your small bar share. They thought the other equally good for lighter soils, but rather too large for our very stiff clays; the society have desired me to express their thanks to you.

Yours, &c.
THOMAS PINCKNEY, JR.

Meridian Hill, August 20th, 1822.

DEAR SIR,

Your favour of the 28th has been received, and I have given as much attention to the paper of Gideon Davis which it inclosed, as my public duties would allow.

The error which he states to exist in the report of the committee, lays, according to his account, principally in the measurement of the ground ploughed. The error in the dynanometer had it existed, is of little consequence as all the ploughs were tested by the same instrument, (and it was their comparative resistance only that it was wished to determine) but he is certainly mistaken, for I paid particular attention to that part of the test, and can say with confidence that the result reported by the Committee is strictly correct—the vibration of the instrument was free, and any little variation in the depth or breadth of the furrow was instantly made manifest by the index. To this test, as I before observed, my attention was particularly directed, and to the frequent measurement of the depth of the furrow during the time that the ploughs were in motion, to see that the ploughmen ran the proper depth. They were allowed to plough any width they pleased, provided they turned the sod fairly over, and it was only during the test of the draft by the instrument, that they were limited to a foot wide, and six inches deep; therefore Gideon Davis's estimate of the work done by furrows, allowing a foot to each, is not correct. How far he is correct in his measurement of the width I am unable to say, for the ground was not measured by me. It was as much as I could do to attend to the draft and ploughing. John Marsh and Roger Brooke, two highly respectable men of the Society of friends were, as Gideon Davis states, entrusted with the measurement, and the statement in the report was taken from their minutes. I observed that they appeared to be very particular, and I can know no reason for believing that they would have any motive for introducing into the report any thing not strictly correct. They appeared to be very exact, and I believe they were really so.

If Gideon Davis's horses were not good, the Committee were surely not blamable on that account; and if any of the ploughs were in better order, or greased, or steel pointed, the Committee had no right to object thereto. They were appointed to test ploughs, not horses, and were bound to decide on such as chose to enter the field, be their condition what it might; and whether the winning plough was "old fashioned" or new fashioned was not a subject of inquiry, the actual performance was all they had to look to. It appeared to be the universal sentiment that the performance of Mr. Brown's plough was very far superior to any other on the field, and I then thought, and still think, that the premium was fairly awarded to it. I have since been told that there was previously a similar competition between Brown and Davis, at or in the neighbourhood of Brookville, and that Mr. Brown then took the premium. If this was the case I cannot see how Gideon Davis can charge our Committee with unfairness or claim for his plough the premium with more propriety than he could claim the premium at Brookville, or reflect on the Committee of the Montgomery county Society. In conclusion I must say that I believe Gideon Davis's a very fine plough, and from the explanations he gave me as to his manner of making them in stocks, I think it likely there would be great uniformity in all of them. What one would perform, I think it likely all would perform, and whether this is the case with all the ploughs of Mr. Brown's make, or of the make of any of the others who exhibited ploughs on the occasion, I am unable to say—his plough also I should think in the long run would be a very cheap one, as there is very little wrought iron about it, and it would be seldom necessary to send it to the shop.

With great respect,
Your ob't serv't,
D. PORTER

ENGLISH CATTLE—account of Mr. Clay's importation—communicated at the request of the Editor, to be made matter of record, in the American Farmer.

Ashland, 19th August, 1822.

Dear Sir,

Your letter under date the 11th ultimo, reached Lexington, whilst I was absent from home, on a visit to one of our watering places, and on that account there has arisen some delay in my answer. I received the portraits by mail, shortly after I addressed you on the subject of them.

You request some account of my imported English Cattle, which I give with great pleasure. In 1816, I wrote to my friend, Peter Irving at Liverpool, the brother of our distinguished countryman, Washington Irving, and requested him to purchase for me two pair of English Cattle, one of the beef and the other of the milk breed. I gave him a carte blanche, both as to price and races. He took great pains to satisfy himself of the best breeds in the kingdom, by a resort to all the means of information at his command; and he became convinced that the Hereford reds was the best, as combining in themselves the three great qualities, beef, milk and draught, which it is desirable that cattle should possess.—Accordingly he caused to be selected and purchased for me, in January 1817, two pair of that breed of cattle. Two of them were two year-olds, and the other two yearlings; the sum of their cost was £105 sterling. They were shipped at Liverpool, in March 1817, on board the same ship, which imported the English Cattle, for some gentlemen in this neighbourhood, an account of which you have already published, but that was altogether accidental, there having been no concert whatever between those gentlemen and me, in making our respective importations. They were received by Messrs. McDonald and Ridgely, in April or May 1817, and I immediately upon hearing of their landing in the United States, despatched a messenger for them. He brought them about one hundred and fifty miles from Baltimore into the State of Virginia, and owing to the great heat of the season and the wearing away of their hoofs, he was obliged to leave them there to rest, until the weather became cooler; so that it was late in August before they reached Kentucky. One of the bulls died on his way from Baltimore to Virginia, from over feeding on red clover. Estimating the first cost of the cattle, and all incidental charges from the time they were purchased in England, until I received them in Kentucky, and charging the three survivors with what was lost by the death of their companion, those three have come to me at five hundred dollars each. My cattle are very beautiful, fine form, symmetry and color.—They are all without exception, a deep red, white faces, white under the belly, at the tip end of the tail and on one or more of the feet. As I have generally parted with the young, I am not able yet to pronounce, with certainty, whether they will realize the high expectations, which were entertained of them by my friend, Mr. Irving; but I believe he has not been deceived as to their qualities.

We have been for some years breeding in this State, very extensively, from some English Cattle, imported forty or forty-five years ago, by, I believe, Mr. Gough, of Maryland, and Mr. Miller Virginia. This race of cattle attains a larger size, than any of those of the late importations which we have made. The latter do not, however, want size, and the circumstance of their being smaller than the descendants of the old importation is abundantly compensated by their having less bone, being greatly superior in symmetry, and distributing their flesh on the carcase much better, so as to produce more meat on the good parts. Animals which are ill made, are difficult to keep in good order, because they cannot struggle for subsistence as well as those which are well built. I may, at some future period, inform you how my cattle turn out.

With great respect,
I am your obedient servant,
H. CLAY.

J. S. Skinner, Esq.

FOR THE AMERICAN FARMER.

A PLAN FOR THE DISSEMINATION OF AGRICULTURAL KNOWLEDGE—SEEDS, IMPLEMENTS, &c.

Perquimino, N. C. August, 1822.

Sir,

The utility, and great benefit derived from Agricultural books, and Societies, are now quite established in the minds of every reflecting person. And now may the field smile; the dreary places be clothed with fruitful verdure; orchards and gardens yield their various and abundant routine of fruits, roots, and vegetables. But the object with many judicious persons, who are remote from good nurseries, is the acquiring good seed; the difficulty in getting it, the uncertainty of its goodness, and the liability of being imposed on, makes them cautious. The soil requisite, the manner of culture, and best method of saving the seed require to be known. I will through the medium of your valuable paper, suggest a means by which societies, and individuals engaged in the farming interest may communicate with more advantage than has hitherto ever been done. In the first place let every Agricultural Society immediately establish a nursery for the raising of the most valuable plants and seeds. Secondly, put up all kinds of garden seeds in small parcels, folded up with printed directions respecting time, culture, method, &c. &c. which may be sealed with the Society's Seal. The seeds being thus enclosed and sealed, would prevent any peculation; and the purchasers would buy with more confidence; small seeds might be put up in ounces, &c. Peas, beans, &c. in pints, &c. Some might be assorted in light boxes for gentlemen containing every kind; and some in the same manner of the most useful for small farmers. Thirdly a small covered wagon might then be fitted out, lined inside with small drawers to contain the seed, &c. The brims at bottom might on their top contain a matrass. A portable stove also, for damp weather, might be very useful. Such vehicles under the care of two steady men; might repair and almost counteract all the ills that ever escaped Pandoras' box. One of these men should be well acquainted with budding, grafting, &c. Thus might we very soon have many of the northern fruits introduced into the southern climes; and vice versa. As buds and grafts might thus have a direct and ready conveyance. Such persons might also be furnished with the most useful agricultural books, prints of small light models of all the best and most economical agricultural machines, which would be furnished by the manufactures, or patentees; as they also could allow them a small premium for orders thus received. Such machinery could then be forwarded to the nearest seaport in trading vessels. There are in North Carolina six circuits of the superiour court; and it is more than probable, that a load of seeds might be disposed of in each circuit; by attending the same, considerable knowledge would be elicited, and much correct information obtained. The time too very seasonable for travelling and dispersing of this "*primum mobile*"—that is March and September. Was such an establishment in action, there is not a gentleman or liberal farmer, but would aid much to its success, and would cheerfully give 100 per cent advance, on first rate seeds thus brought to his farm, or at the Court House, where he could have occular demonstration of the great benefit to be derived from such an intercourse while each would be anxious to send back some of their superfluities to increase the general stock. This would give men the greatest taste for agricultural improvements, and tend much to the raising and increasing of Agricultural Societies. Numbers who are too remote to attend, might join themselves to some society by subscription; and thus lay the foundation for improvement in the union and means that such societies would then have. Indeed the wealth, prosperity, and comfort, of every individual would be improved by such means, and a great national good effected. The system of agriculture thoroughly understood, and more thought of the man, who should raise the greatest quantity of food on the smallest piece of ground, than of the wild ambition of those who aim to cultivate the most thousands of corn hills, crop or no crop.

North Carolina labours under the disadvantage, of being more remote from intercourse and improvement, than her sister states. But too much praise cannot be given to the fair sex of this section of the Union, who are not only daily employed at the wheel or loom, and their other many avocations, but to them, generally belong the management of the garden, and indefatigable are they to the extent of their knowledge. With what pleasure will they, through your instructions, be enabled to furnish green peas, asparagus, &c. half the summer on their tables; raddishes, sallads, &c. the season through; and other delicious roots and vegetables, that are yet unknown, or the things of a day, may hereafter load with health the Rustic Board, and by their salubrious tendency counteract the effects of a too general living on salt provisions.

Now sir, the agricultural world would be much benefitted by such establishments, which after two or three years might be superceded, or the necessity not so immediate. I would recommend to to you, sir, to take the lead in fitting out something of the kind, as you have all the means, and possess that "*amor patria*"—which you are now constantly shewing in the American Farmer.

LIZEUR.

John S. Skinner, Esq.

FOR THE AMERICAN FARMER.

ENGLISH METHOD OF CURING BACON.

Mr. Skinner,

About twelve months ago, or perhaps more, two very pleasing communications were inserted in your highly valued paper, teaching us how to save our bacon, and should it ever be my lot to take charge of that very interesting branch of domestic œconomy, (for as yet I am only a consumer) the information therein contained will be attentively perused, and so far as the receipts of the adepts are not inconsistent, will be strictly adhered to. They are both, no doubt, the result of experience, and whoever should be *doomed* to dine with either of the gentlemen I am persuaded would not have cause to regret that their kind host had administered any other than his own favourite prescription in the curing of his hams, and it is more than probable such is the excellencies of both, that as strong a party could be formed to sustain and advocate the merits of each particular system, as is now to be found through the country in support of the "hockside," and its opposite—or in other words the Maryland and Virginia side. Every man of reflection, and *who looks deep* (more especially if he should belong to that very knowing and respectable family, the Croakers,) must see that this is bringing about a "bone" of contention which is one day or other to set these two sister states by the ears—as the Missouri question, has recently done with more of the same happy family. To be Hockites and anti-hockites will one day (no doubt distant) be the badge of distinction like the White and Red Rose of York and Lancaster. Pardon this digression, and return to the subject—whilst we have been instructed and pleased by the communications from both the gentlemen, it was thought that it would not be otherwise than appropriate to detail a conversation with an English dealer (to use his own phrase) in pigs, a native of Hampshire now resident in Baltimore, who states that the part of England from whence he came was above all other parts distinguished for the curing of bacon, and that the process by which this excellence was effected is by *singing or burning the hair instead of taking it off by scalding*, in the way that we are accustomed to pursue, and that so much the more was the *singed bacon* esteemed, that it would command from four to five and six shillings more in the hundred than that which was cleansed in the ordinary way by scalding; and when my informant left England, which was about three years since, that cleansed by scalding, commanded 78 shillings, and the singed 84 shillings the hundred. He represented the mode of cleaning to be very simple. The hog having become perfectly dry after it is killed, place it upon the ground or a board, cover it over with straw and set it on fire, and after burning the hair quite off, at the same time taking especial care not to burn the skin, it should then be hung up and swept clean, and scraped gently, so as to avoid breaking the skin; after it has been washed down, it is to be opened and cleansed within, &c. My narrator stated another peculiarity of no great consequence, and not having it is believed any effect upon the quality of the article in question; yet as at variance with our mode it is mentioned. The Hampshire practice is to cure the shoulder, middling and gammon; united in this form there would necessarily be less rust or outside.* Now I confess myself at a loss for a reason shewing why this singing operation should improve the bacon. Yet as it was stated to me as a received fact, and that there must be the difference the price denotes, I thought it would not be foreign from the object of your paper to throw it to the public, that the *knowing ones*, and the curious, if they thought proper might amuse themselves with reasoning into causes, or make experiments to establish or controvert facts Because the peculiarity in the curing of English hams is related, it is not to be inferred that I have ever been prevailed upon to believe for a moment that an English ham can be brought in comparison with one of our own curing—true it is to taste an English ham has never been my lot, neither have I ever been favoured with a cut of the roast beef and plum pudding of Old England. Yet such is the fact, it does not wound my feelings to confess that the latter two dishes are superior to our own. But to acknowledge their hams equal to ours would be *giving up every thing*, and such is the estimate placed upon our supposed preeminence in this particular, that I doubt whether there is not many a merry landlady, who proud of her renown for curing bacon, and whose *dish fills* with essence at the first incision, would not think it more reasonable "to give up the fisheries" than to give up the question of supremacy in the curing of hams. Sure it is that the superior excellence of an English over a Maryland ham cannot be acknowledged without having been first tasted by

"RUSIN URBE."

August 28th, 1822.

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[*] *There seems to be good reason in this—especially as some good judges recommended to salt it on boards, and to let every thing* drain off. *On the other hand our old friend Sylvanus, who has got to be authority on this subject, says, that middlings, shoulders and hams, should remain in salt, and smoked different periods of time according to their thickness.—*EDIT. *A. M. FAR.*

SILK WORMS.

The Editors of the Gazette have been favoured with a translation of some remarks on the Raising of Silk Worms, grounded upon the experiments of the writer.

From these experiments it appears that the raising of Silk Worms is not only very simple but attended with little labour, and does not divert the hardy hands of men from the work of their fields, as women, girls and boys may be advantageously employed in spreading the leaves of the white mulberry tree. which is all the nourishment the Silk Worm requires.

Shortly after the declaration of independence, many of the ladies of Philadelphia turned their attention to raising silk works at their own homes, and they wore gowns of silk of their own raising; and to this day, rows of the mulberry are still standing in the vicinity of that city. Numerous causes could be here enumerated why the good work was not persevered in. But the object of the writer is, to induce thousands, who cannot be more profitably employed, to re-commence, or start anew, in one of the most delightful pursuits—and for this purpose gives the following experiment.

In the first week of May, when the leaves of the mulberry began to expand, the writer, who resides about two miles from Philadelphia, took out of a china tureen, a paper upon which the butterflies of the preceding year had laid their eggs. The tureen had remained untouched in a closet of an upper room on the north side of the house, where there had been no fire. The paper of eggs was opened before an open window, in order to ascertain whether they would hatch by the simple action of the atmosphere, without the aid of artificial heat. Between the 5th and 8th of the month, more worms, not larger than ants, were hatched, than he could keep with the small quantity of mulberry trees he had been able to collect.

In the piazza fronting the south, wainscoated, closed with ten windows, and Chinese blinds, a wire 10 feet by 4 was prepared. The worms attached themselves to the branches of mulberry laid on the paper where they had hatched, and then deposited on the wire frame. An extent of about 18 inches square was at first sufficient to contain the whole of the worms. The fresh leaves were distributed to them with a free hand. Their growth was so rapid, that in less than a week they occupied the whole of the frame! In the fourth week they were too crowded. Signs of their coming to maturity were visible—small sticks and brush were arranged for them to climb and work upon. By the 3d of June, they had so far advanced in spinning, that a sample of silk was exhibited at the Cattle Show that day, which attracted the attention and admiration of the members of the Agricultural society. A week after, the crop was gathered, and thoroughly smoked in a barrel with brimstone, which killed the larva of the worm, when it is metamorphosed into a butterfly, and perforates the ball in coming out. The balls were then preserved that the silk might be spun at leisure.

In cutting open a ball of the preceding year, the dead worm was found to be as dry as powder, and by rubbing it between the fingers, fell to dust, while the ball was free of stain. In five weeks a crop of 25 pounds of silk was gathered as good in all respects, as any ever raised in the South of France or Italy, from worms raised in a piazza, with no other check to the free operation of the air, than what was occasioned by the Chinese blinds, the sashes having been left open; which proves, that the climate of our middle states is favourable to the raising of silk worms.

The writer on this subject supposes, that immense quantities of the cods or raw silk may be raised in this country, as well as cotton, and sent abroad to be spun; thereby producing no contemptible source of revenue.

He also offers the opinion, that better goods can be obtained from France and Italy, and at a cheaper rate, by sending them our native cods.

A friend has promised us a paper on the subject of the silk worm. Should he see this it may remind him of it. EDIT. A. M. FAR.

Editorial Correspondence.

Boston, *September* 27, 1822.

DEAR SIR,

I have this moment returned from the Worcester Cattle Show—the exhibition of Stock was considered very fine—the working cattle are superior to any thing ever exhibited in Massachusetts before—the town of Worcester alone turned out 125 yoke of oxen, all attached to one chain—altogether, there were exhibited about 300 yoke of oxen. Col. Powell of Pennsylvania and Dr. Stewart of Baltimore, were there, and expressed themselves highly pleased. Mr. Stephen Williams' improved short horned Bull was much admired. But I do not think him equal to Col. Lloyd's Champion.

Many of your Eastern friends were at the Show. Mr. Parsons' stock, Holderness, obtained the first premium. You are confidently expected at the Brighton Show, and Capt. Winship tells me, from the entries already made, that there will be a good exhibition. I hope you will find it convenient to attend.

THE FARMER.

BALTIMORE, FRIDAY, OCTOBER 4, 1822.

PRICES CURRENT.—CORRECTED WEEKLY.

Red wheat, $1 27 to 1 31—White do., $1 35 to 1 45—Corn, 55 cts, for new, 60 to 65 cts for old—Oats, 35 to 37½ cts.—Rye, 65 cts.—Flour from the wagons, $6 37½ to 6 50—Shad, No. 1. trimmed, $7 50 to $8—No. 2, $5 50 to $7—No. 1, untrimmed, $7—No. 2, do. $6—Herrings, No. 1, $3 25 to 3 37—No. 2, $3 to 3 12—Beef, Northern mess per bbl. $10 to 10 25—Baltimore, prime do. $9 to $9 75—Hams, 12 to 15 cts.—middlings, 10 to 11 cents.—Other articles same as last report.

TOBACCO—No sales, very dull.

HORTICULTURE.

POMARIUM BRITANNICUM,

An Historical and Botanical account of Fruits, known in Great Britain, by Henry Philips, —Second Edition.

(Continued from page 218.)

MULBERRY.—MORUS.

In Botany, a Genus of the Monœcia Tetandria Class.

That the mulberry-tree is a native of other parts of Asia besides China and Persia, we have the authority of the Bible, where, in the 2d book of Samuel, we read that David came upon the Philistines, and smote them over against the mulberry-trees. Again, in the Psalms, we read, "He destroyed their vines with hailstones, and their mulberry-trees with frost."

This fruit was first brought from Persia into Greece and Rome, and was more esteemed by the Romans, even in their most luxuri ous days, than any other fruit.

Ovid has celebrated this tree in his story of Pyramus and Thisbe:—

The berries, stain'd with blood, began to show
A dark complexion, and forgot their snow;
While, fatten'd with a flowing gore, the root
Was doom'd for ever to a purple fruit.
The pray'r which, dying, Thisbe had preferr'd,
Both gods and parents with compassion heard:
The whiteness of the mulberry soon fled,
And, rip'ning, sadden'd in a dusky red.

Pliny observes (book xv. c. 24,) that "there is no other tree that was so neglected by the wit of man, either by grafting, or in giving it names, except that of making the fruit large and fair." "At Rome," he continues, "we make a difference between the mulberries of Ostia and those of Tusculum." This author observes, in his xvi*th* book *c.* 25, that, "of all the cultivated trees, the mulberry is the last that buds, and which it never does until the cold weather is past; and was therefore called the wisest of all the trees; but when it begins to put forth buds, it dispatches the business in one night, and that with so much force, that their breaking forth may be evidently heard."

The mulberry was much used in medicine by the Romans, particularly for the diseases of the mouth, the windpipe, the uvula, and the stomach. The leaves and the roots were also used medicinally by them. (*Pliny*, *b.* xxiii. *c.* 17.)

The mulberry-tree is stated to have been introduced to this country in the year 1548, and it is said that it was first planted at Sion House, where the original trees still thrive, and which I have seen since the first part of this work has been put to press. The interior of these trees is so entirely decayed, that the timber has so far returned to its native earth that it will crumble in the hand; yet its branches, that are supported by props, are so well nourished by means of the bark, that the fruit and the foliage appear as luxuriant as those of the youngest trees: a strong proof of the durability of the mulberry-tree in this country. The first Duke of Northumberland said he could trace these trees back three centuries.

This fruit is mentioned by Tusser, in 1557, and by Gerard in 1597, who notices both the white and the black mulberry, and says they grow in sundry gardens in England: he adds, "that in Italy they do maintain great woods and groves of them, that their silk-worms may feed thereon."

The planting of mulberry-trees was much encouraged by King James the First, about the year 1605; but parties running so high at that period, the attention of the nation was occupied on political affairs; and the procuring of silk in England was neglected, and has never since been attempted, although the mulberry-tree has been found to thrive exceedingly well, and the silk-worms to spin as well as in any other part of the world. The mulberry-trees are now alive, and bearing fruit in many parts of the country, that were planted in the time of James the First, which is a proof of their durability. I have lately seen a mulberry-tree, of the nigra species, which is supposed to be one of the oldest in England, in the garden of the Rev. Dr. Crumbie, adjoining Greenwich Park; and, notwithstanding its neglected and dilapidated state, it is one of the greatest curiosities I have seen in the shape of a fruit-tree in this country. It throws out ten large branches so near the earth, that it has the appearance of half a score of large trees rather than of one; and notwithstanding many of the projecting branches have been sawed off, still it completely covers a circumference of 150 feet; and although the elder-trees have fixed their abode in some parts of the trunk, and other parts are covered with ivy, yet it continues to give shoots as vigorous as the youngest tree, and produces the finest mulberries in England. It is a regular bearer; and the gardener assured me that he gathered more than eighty quarts a week during the season.

It is observed in Evelyn's Sylva, that this tree possesses the peculiar property of breeding no vermin, neither does it harbour any caterpillar except the silk-worm. The fruit, when ripe, stains the hands; but when unripe, is a good cleanser.

It is one of the latest trees to blossom, and one of the earliest to ripen its fruit; which, when ripe, is of a cooling aperient nature, but quite of an opposite quality when unripe, being a strong astringent; and it has been already observed to harbour no insects, yet it is the peculiar food of a voracious worm.

The root of the mulberry-tree has an acrid bitter taste; it is powerful in its effects; and has been used with great advantage against worms, particularly the tape-worm. The juice of this fruit, mixed with cider, is esteemed the best of all the English vinous liquors.

Miller mentions eight varieties of this agreeable fruit; which appears to be again duly appreciated at the dessert, as I find it is cultivated in a hothouse belonging to T. A. Knight, Esq., who, I believe, is the first person that has attempted to force this excellent berry. In the garden of Thos. Wm. Coke, Esq. M. P. at Holkham Hall, Norfolk, there are two mulberry-trees trained to a trellis, upon a south wall. These trees are about 16 feet high, and the lateral extent of the branches of one of them is upwards of 94 feet, and the other exceeds 97 feet. They have been planted about 30 years; and it is found that the fruit is much larger than that produced on standard trees, and their time of maturity much earlier, and affording an abundant succession from the middle of July until October. They are pruned twice a year, leaving spurs of two inches long, which, at the winter pruning, are shortened to about an inch in length. It is both a common and a bad practice to make grass-plats under mulberry-trees, by this means retarding the ripening of the fruit by the coolness of the grass; whereas the heat reflected from the earth would greatly promote the ripening.

The mulberry must have been a most valuable tree to the Persians and Chinese in ancient times, on account of it's leaves feeding the silk-worms, which enabled them to supply all the known world with silk, the price of which, in Europe, was an equal weight of pure gold, even as late as Justinian's time, A. D. 526. Madame de Genlis gives the invention of silks to the Chinese; she relates in her work, (La Botanique, Historique et Littéraire) that the Empress Siling Chi, wife to Hoamti, was desired by that emperor to examine the silk-worms, and endeavour to turn their web to some useful purpose, which she did, after various trials and experiments; and by feeding them with mulberry-leaves, she discovered the means of winding the silks, and the making of silk stuffs, which she embroidered with flowers and birds. Voltair states, that the valuable insect that produces the silk, is originally from China, front whence it was carried into Persia, though not until very late, together with the art of weaving the down in which it is enveloped.

Should a few spirited land-proprietors make the experiment of grubbing up their hedge-rows, and planting fences of mulberry-trees, I have no doubt but that in a few years they would reap as great a profit from their hedges as from their corn. It would find immediate employ for many labourers, and would in time require the assistance of thousands of the lower classes to gather the leaves and attend to the breeding and feeding of the silk-worms, the winding of the silk, &c.: indeed, the whole process is calculated as an employ for the aged and the infirm, who, being unable to do laborious work, must now, of necessity, add to the weight of the parochial taxes. I am fully of opinion that it would be the foundation of a permanent reduction in the poor rates, which must continue to augment, unless employ be found equal to the increase of the population. It is worthy of notice that the trees, which are planted for the feeding of the silk-worms, are seldom suffered to grow to a height to injure the land; but they are kept as shrubs or espaliers. The great nurseries of mulberry plants, in the plain of Valencia, in Spain, are produced from seeds obtained by rubbing a rope of esparts with ripe mulberries, and then burying the rope two inches under ground. As the young plants come up, they are drawn and transplanted; the trees are afterwards set out in rows in the fields, and pruned once in two years.

It is now 2,143 years since wrought silks were first introduced into Greece from Persia; and about forty-nine years afterwards the Grecians obtained them from India.

In Rome a law was passed by the senate in the reign of Tiberius, forbidding men to debase themselves by wearing silk, as being fit only for women.

Heliogabalus was the first Roman that wore a garment all silk, which must have been about the year 220, A. D. The Emperor Aurelianus, who died in 275, denied his empress a robe of silk, because it was too dear. In the year 555 some monks, who had been in India, brought some eggs of the silk-worm to Constantinople, where, in time, they produced raw silk, which was manufactured at Athens, Thebes, Corinth, &c.

Charlemagne sent Offa, king of Mercia, a present of a belt, and two silken vests, in the year 780, which is the earliest account we have of silk being seen in this country.

In 1130 the Sicilians were taught to breed silk-worms, and to spin and weave silk; from whence the art was carried to Italy, Spain, and the south of France. Some noblemen's ladies wore silk mantles at a ball given at Kenilworth Castle, in Warwickshire, in 1286; and it was worn by the English clergy in 1554.

Stockings made of silk were first worn by Henry the Second, of France, in 1543; and in 1549 mulberry-trees were propagated through all France; and the breeding of silk-worms was much encouraged by Henry the Fourth of that country.

Henry the Eighth of England received a few pair of silk stockings from Spain; but knit silk stockings were not known until they were made by Mrs. Montague, who presented the first pair to Queen Elizabeth. Thus silk has gradually come into use, and it is now so common in this country, that it would be difficult to find a female servant in the streets of London, or any part of the kingdom, who had not some portion of her dress composed of silk.

The alba, or white mulberry, is a native of China.

The nigra, or black mulberry, is the tree of the largest size, and the fruit is of a blackish red colour, and from it a good wine is made: this variety is a native of Persia.

The rubra, or red mulberry, is a native of Virginia.

The Japan mulberry-tree is called *Papyrifera*, from the bark of which a kind of paper is made.

The mulberry-tree's seldom producing fruit until it has arrived at a considerable age, has been much against it's cultivation; but it is now discovered, that by grafting it from the aged trees, or, to use a common phrase, putting an old head on young shoulders, it soon becomes fruitful.

NECTARINE.—AMYGDALUS, MUCPERSCEA.

In Botany, a Genus of the Icosandria Monogynia Class.

This fruit is thought to have derived it's name from Nectar, a beverage supposed to be drunk by the heathen gods.

It is a native of Persia, and was brought into this country, with the peach, about the year 1524. It does not appear at that time to have been distinguished by any name distinct from other peaches of which it is a species, as Gerard was living when it was first obtained, and published his History of Plants about thirty-five years later, wherein he describes four kinds of peaches, and says, "they are set and planted in gardens and vineyasds: I have them all in my garden," continues he, "with many other sorts," which shows there was a variety when first introduced. He mentions one kind of peach which appears to have been the Nectarine, *Persica rubra*. "The fruit of peaches," says Gerard, "of this sort, be round, of a red colour on the outside: the meat likewise about the stone is of a gallant red colour. These kinds of peaches are very like to wine in taste, and therefore marvellous pleasant."

Pliny says, of all the peaches, the one most admired in Rome is that named Duracina, from the solid substance of the meat; which seems to agree with the quality of the nectarine, the principal distinction of which, from other peaches, consists in the firmness and fineness of it's pulp, it's superiour flavour, and smooth skin.

There have been many instances of nectarines having grown not only on peach-trees, but on branches bearing both beaches and nectarines, without either budding or grafting: whether this is owing to it's being so nearly allied to the peach, or by the pollen of the nectarine being conveyed by the bees or the wind, I have not yet been able to ascertain, although this circumstance has occurred in the gardens of persons eminent for their knowledge of fruits, as witness Mr. Wilmot, of Isleworth; James Wyatt, Esq., Hounslow; William Gilpin, Esq., East Sheen; and in the garden of the Earl of Landesborough, Yorkshire.

Thompson has beautifully distinguished it from the common peach in his Seasons:—

———As I steal along the sunny wall,
Where autumn basks with fruit empurpled deep,
My pleasing theme continual prompts my thought;
Presents the downy peach, the shining plum,
The ruddy, fragrant nectarine; and, dark
Beneath his ample leaf, the luscious fig.

The flowers have an aromatic bitter taste, and, when fresh, an infusion of half an ounce in water, or a drachm, when dry and sweetened with sugar, is a useful laxative for children. *(Brookes, vol. 6.)*

OLIVE.—OLEA.

In Botany, a Genus of the Diandria Monogynia Class.

Of this tree we have very ancient mention, since it is related, in the Book of Genesis, that the dove which Noah sent out of the ark, returned with an olive leaf in it's mouth, by which he knew that the waters of the Deluge had abated. Since this time the olive-branch has been used as an emblem of peace by all civilized nations; and it is observed that a green bough answers the same purpose amongst the most savage people in every part of the world.

That the olive-tree was anciently very much esteemed by the Hebrews, is proved by the parable of Jotham:—

"The trees went forth on a time to anoint a king over them; and they said to the olive-tree, Reign thou over us. But the olive-tree said unto them, Should I leave my fatness, wherewith by me they honour God and man, and go to be promoted over other trees?"—Judges, chap. ix. verse 7.

David also seems to have considered the olive as a blessing when he says, "Thy children like the olive-branches round about thy table: Lo! thus shall the man be blessed that feareth the Lord."

The Grecians appear to have thought no less of this tree and it's fruit than the Israelites. In their fabulous histories, we are informed, that the gods having been called on to settle a dispute between Neptune and Minerva, arising from the desire of each of them to give name to the new city of Cecrops; they determined to give the preference to the one who should produce the most beneficial gift to mankind. Neptune, striking the ground with his trident, created a horse; but Minerva, by causing an olive-tree to spring from the earth, gained her point, and from her was the city called Athenæ, now Athens, since the olive, the emblem of peace or agriculture, was much preferable to the horse, the symbol of war and bloodshed. Minerva and the Graces are also represented as crowned with olive-branches.

A contribution of olives was given by all the Grecians who attended the Panathenæa, a festival held at Athens in honour of Minerva. Those who excelled in any of the games during this festival, were crowned with a wreath of olives, which grew in the grove of Academus, a place near the city, with spacious and shady walks, belonging to a man of that name. Plato having here opened a school of philosophy, all places of learning have been since called Academies.

As to the soil of the olive-tree, we may conclude, from several passages in Scripture, that it grew naturally in Syria; but particularly near Jerusalem, if we may judge by the Mount of Olives, so often mentioned in the New Testament. It was first planted in Italy in the thirteenth year of the reign of Servius Tullis, the sixth king of Rome; and in that very year was Nebuchadnezzar restored to his understanding and his kingdom, after having spent seven years among the beasts of the field.

The olive seems to have been highly appreciated by the Romans; as Pliny says, "except the vine, there is not a tree bearing fruit of so great account as the olive. Fenestella informs us," says this author, "that during the reign of Tarquenius Priscus, which was about the 183d year from the foundation of Rome, there were no olive-trees either in Italy, Spain, or Africa, which is a strong presumption that they grew originally only in Syria." Theophrastus states, that in the 440th year of the city, there were no olive-trees in Italy, but on the coast, and within forty miles of the sea; but Pliny says, in his time, they were to be found in the very heart of Spain and France, but that the olives of Syria, although smaller, produced the best oil. Virgil mentions but three kinds of olives: Columella mentions ten varieties, but says he believes they were much more numerous.

The olive-tree was first introduced into England in the year 1570; but there is little inducement for us to cultivate it, since it is by no means handsome, and we have no desire for its ripe fruit. Besides, the climate in general is not sufficiently warm to assure us of a crop, though I have no doubt but it would flourish in many situations on the south side of the Sussex Downs, where the fig-tree thrives: indeed, in some parts of Devonshire it is found as a standard tree, and is seldom injured by the frost.

According to Columella, this tree flourishes best in dry hills that are full of white clay; for in moist and fat fields it produces plenty of leaves, but no fruit. Though this author contradicts the idea that the olive will not grow sixty miles from the sea, he states, that where an oak has stood it cannot be raised.

The olive-tree requires but little care in the cultivation, and produces fruit but once in two years. This fruit the modern Greeks during Lent eat in its ripe state, without any preparation, but a little pepper, or salt and oil.

We receive it from the south of France, from Spain, and Portugal, pickled in the following manner: it is gathered unripe, and suffered to steep in water some days, and afterwards put into a ley of water and barilla, or kali, with the ashes of olive-stones calcined, or with lime. It is then bottled or barrelled with salt and water, and in this state do we meet with it at the desserts of our most wealthy tables, where fashion has done much in having introduced and given a fondness for olives, which seems to be an acquired taste: however, they are grateful to the stomach, and are considered good to promote digestion and appetite.

But olives are chiefly cultivated for the sake of the oil that they produce, which is not only a profitable article of commerce, but forms a principal one of food to the inhabitants of the places where these trees are found. This oil is contained in the pulp only, whereas other fruits have it in the nut or kernel. It is obtained by simple pressure, in the following manner: the olives are first bruised by a mill-stone, and afterwards put into the trough of a press for the purpose, which, by means of turning a strong screw, forces all the liquor out, which is called *virgin oil.* A coarser kind is obtained afterwards, by adding hot water to the bruised fruit.

The oil of olive seems to have been of great utility to the ancients, since Aristæus, son of Apollo by Cyrene, was regarded as a rural deity for having taught mankind to extract it, and also to make honey, cheese, and butter. The wrestlers were anointed with it; and it was made a substitute for butter, which among the Romans was used as a medicine.

We find, in the book of Leviticus, that oil formed a principal part of the meat offerings, which the Israelites presented to the Lord: "If thou bring an oblation of a meat offering baken in the oven, it shall be unleavened cakes of fine flour mingled with oil, or unleavened wafers anointed with oil. And if thy oblation be a meat offering, baken in the frying pan, it shall be made of fine flour with oil."

Pliny informs us, that in the 500th year of the city, when Appius Claudius and L. Junius were consuls together, a pound of oil was sold for twelve ases; but that in the year 680, ten pounds of oil sold for one as, and that, in twenty-two years after that time, Italy was able to furnish the provinces with oil; and it was much used at their baths, having, as they supposed, the property of warming the body, and defending it against the cold.

The best olive-oil at present is obtained from Provence.

Olive-oil is esteemed good for the breast and lungs; it tempers the sharp choleric humours in the bowels, is useful against all corrosive mineral poisons, as arsenic, &c.; opens the urinary passages; and is good for the stone and the gravel.

The wood of the olive-tree is used by cabinet-makers, from it's being beautifully veined, and admitting an excellent polish.

Selections from late numbers of the London Farmer's Journal, *received at the office of the American Farmer.*

Sir Wm. Hope's "*Complete Horseman,*" *abridged from the French of the Sieur* de Solleysel. *Published in* 1717.

It would be curious to inquire how many of the conclusions in this body of Horsemanship and Farriery, which are said to be founded on experience, have been since confirmed by that test of truth. The first we meet with is this:—

"OF THE EYE-PITS."

"The eye-pits should not be too much sunk, for if they are deep and hollow, they are ugly, and make the horse appear to be old. *Horses that come out of an old stallion*, have it from their very youth, some more, some less."

"OF THE EYE."

"If you can perceive above the bottom, or apple, of the eye, as it were, *two grains of chimney soot fixed to it*, it is a sign the chrystal is clear and transparent; and if to this, the bottom of the eye be without spot, or whiteness, then the eye will be good."

"OF THE AGE."

"Another certain mark of *old age* [having described the usual marks by the mouth] is when a horse *seeleth;* that is, when upon his eyebrows about the breadth of a farthing of white hairs, mixed with those of his natural colour. A horse never seeleth until he be 14 years old, and always before 15 or 16, at farthest. Horse-coursers [dealers] commonly pull out those white hairs with pincers; but if there be so many that it cannot be done without making the horse look bald and ugly, then they colour their eyebrows that they may not appear old." More than half the knowledge in selling horses, consists in *how to cheat*, and in buying, to detect the tricks of the dealer. "It is an infallible maxim (says our author), that a man should never buy a horse which is both light-bodied and fiery, because such horses destroy themselves in an instant. Many people do ignorantly confound fieryness with vigour, or high mettle; whereas, true mettle doth not consist in fretting, or trampling, dancing, and so forth, but in being very sensibie of the spur. Not but that fiery horses are many times high mettled, but their fault is in being so with this fretful disposition." Again: "A horse low in case, cannot be made plump unless he eat much hay, which makes his belly like that of a cow with calf." This puts us in mind of the *hay and water system* at livery stables, mentioned by *Taplin*, who remarks very truly, that a horse which has eaten much hay is not fit to travel or labour, because the stomach being too much filled, presses on the lungs, and impedes the breath. Also, he says, that horses which are kept on straw, or poor food, are obliged to eat so great a *quantity*, for so little nutriment, that they are not fit for business, nor can be put to labour without danger to their wind; nor to any profit, they are so sluggish and unweildy.

The custom of robbing horses of their corn at stables (or otherwise charging for that which was never given to them), is the worst species of theft imaginable. At livery stables, they will bring out your horse as round as a barrel, and as bright as a star; but by the time you have driven or rode him moderately ten miles, he will be all in a froth with fatigue.

"*How to know if a Horse have a good appetite, or be subject to the* Tick."

"If a horse be light-bellied, it were convenient to try him one night, giving him 15 or 20 pounds weight of hay, and if there be none next morning he has a good appetite. Take notice, while he is eating his oats, if he be not subject to the *tick*, which is pressing the edge of the manger with his upper teeth, and giving a kind of belch through his throat, whereby he loses part of his oats." This has been since called *crib-biting*, which does not mean a horse that gnaws his manger through wantonness, but one which has an infirmity in the throat, or lungs, which inclines him to cough over his meat.

"*Of the art of shoeing,*" the Sieur's observations are generally rational and useful: there are four rules, he says, to be observed. The first is, "*Toe before, and quarter behind,*"—by which he means that the nails should have good hold at the toes of the fore feet; but on the hind feet, the hold should be in the quarters, because the horn is thin on the toes. The second rule is, "*Never to open a horse's heels.*" That is, in paring the foot, do not cut the heel away. The third rule is, "*To make use of as thin and small nails as possible;*" and the fourth, "*To make the lightest shoe you can,*"—meaning, according to the nature of the labour. "Those who think it frugality to shoe with thick heavy shoes, and seldom, are deceived; for thereby they not only spoil the back sinews, but lose more shoes than if they had been light. Do not pare your horse's feet almost to the quick, as some people do, who think thereby to prevent the so frequent shoeing of their horses. The foot pared, you must fit the shoe to it, which must not press upon the sole at all, but rest on the horn; neither too broad nor too narrow in the web: neither must its spunges extend any farther than the heel [by the *spunge*, he means the end, or heel of the shoe], but must follow the exact compass of the foot, just to the corners of the frush." He vehemently condemns *calking*, or heels turned down,—"Unless in time of frost, because *necessity hath no law;* and it were better the horse should spoil his legs, than the rider should be in continual hazard of breaking his." [neck].

ON SHEEP.

Hants, Oct. 2, 1821.

Sir—Volumes have been written on the most profitable management of that most valuable animal the Sheep, and it has been generally allowed, that by turnips, cabbages, and other green spring food, they may be bred and nourished to the greatest profit, and I believe that to be strictly the case. But on extensive grass farms, I wish for information, whether that sort of stock may not be managed with a profit nearly equal at least to that of the larger? My own conception is, that it may, and for this obvious reason: turnips, and other green spring food, are of comparatively late introduction, within the last century at the most; they were unknown, and certainly not in general use, till within these last 50 years, and yet flocks equally large were maintained in those times, as in the present, and certainly to profit, or they had been abandoned for stock of a different description: besides, in France, Italy, Spain, Germany, and the Netherlands, where very large flocks are kept, this sort of food is wholly unknown, or at least not so appropriated; whence an inference may be fairly drawn, that such stock is maintainable without it. I should suppose, that they keep a certain portion of grass untouched for their support, and in very bad weather maintain them upon hay and other dry food. This management, therefore, must be clearly practicable with a certain profit, and I should wish to have the ideas of some of your valuable correspondents on the subject, and to learn what estimated quantity of hay would be consumed by a certain number of sheep of middling quality and size, such as the most approved South downs. Such estimates, founded upon practical knowledge and observation, would be extremely valuable to every grass farmer; and as this idea cannot be the first suggested, I much wish to avail myself of the experience of others on the subject: without it, every grass farmer must turn sheep wholly out of his stock, and substitute larger animals. Wishing for every attainable information on this interesting subject,

I remain, Sir, your humble servant,

J. S.

ON NEAT CATTLE.

October 4, 1821.

Sir—The letters in your Journal turning much on *Neat Cattle*, I send you a few extracts from my common-place book If you think them useful, publish them; but use your own discretion. I pick up information from various authorities, but chiefly from practical men; and I like to reduce knowledge to maxims. Your's, &c.

SCRIP-SCRAP.

No. 142.—Quadrupeds commonly turn after the dam of the sire.

No. 144.—In crossing the breed of cattle, always put the hot (pure) blood at top.

No. 86.—Breeding in-and-in will *lessen* the *vigour* of the male, and the *sire* of the animal bred; but will often *give* a tendency to *fatten*.

No. 143.—Never breed from a *chance-good* animal.

No. 100.—You may breed fatting stock, but you cannot *breed* a good *milch-cow*.

No. 145.—Peaty pastures will cure scouring cattle.*

No. 68.—Calves should have *no change* of pasture, and they will *have no quarter-evil.*

N. B. I have kept cows (five to ten) for more than 20 years; rearing two to five calves annually,—and followed the old farmers' precaution (taught me in 1795). I have constantly *secured* my calves in one field for the whole summer and autumn; except in 1816,—when rearing but *one calf*, I suffered it to run with my dairy cows. That calf, at about five months old, was seized with the *quarter-evil* and *died!* It is the only calf I ever lost in that disorder.

ON WHEELS.

September 22, 1821.

Sir—I wish your correspondent *J. C.* had given a true account of the difference in strength between a bended axle and a straight one, or reference where it might be obtained: I would not again have attempted to trouble you, or even if that which he hath given would have applied to the bended wheels, in the way he has represented it.

If he understands how to tree a bended wheel, he must know the downright spoke should always be vertical upon a level surface, and therefore capable of supporting as great a weight as the straight wheels, beside the additional advantages of counteracting the side swings and blows by the hurters against the boxes upon uneven surfaces.

If the under spoke was not vertical, the wheel would bind upon the axle-tree, and grind upon the inner edge of the shoe, similar to the flat sole upon a convex road; and I should be glad if *J. C.* would teach me, or any of your readers who are inclined to believe his statement upon the bended scantling, what portion of the weight the upper spoke sustains: I conceive the greater the pressure upon the under spoke, the greater the tendency to raise the opposite one out of the nave.

I am sorry, Mr. Editor, to see that you advocate the cause of flat soles,† when I should have thought you convinced that the flat sole can in no case wear out the middle more than the edges, except by chance they run upon a convex rib: then why is not that sole preferable, which will retain its original shape the longest? I had much rather you had justly stated my former arguments upon this subject than have used the least panegyric. I would just add, before I conclude, if the length of the joint upon a straight axle, and a flat sole parallel thereto, be duly considered, it will be evident that a plane will be required for it to move upon to be free from binding and grinding. Should it be replied, this may be remedied by giving more play upon this long joint; then it should be considered, the more there is between the hurter and linch-pin, the heavier the swings and blows against them, and the more play there is between the bushes and the axle, the more the wheel will rake outwards, or under the carriage, and the more liable to either break down or tumble over. From, Sir, your most obedient and humble servant.

A Common Leicestershire Farmer.

RECEIPT FOR MAKING GREEN GRAPE WINE.

Lewisham Nursery, Oct. 7, 1821.

Sir—Having for a number of years been very fortunate in making British Wines, I herewith send you a receipt for making Green Grape Wine, which is particularly applicable this late season, as there are many farmers, and others in the country, who have large quantities of grapes that will not ripen, and which they will find, by making use of them in this way, will turn to a very good account. Care must be taken to have the casks, bottles, &c. very sweet and clean, and I have no hesitation in pronouncing this the finest British wine that can be made.

I am, Sir, your obedient servant,

JOHN WILLMOTT.

To make Champagne from Grapes equal to foreign.

Gather the Grapes when they are just turning, or about half ripe; pound them in a tub, and to every quart of berries so pounded, put two quarts of water: let it stand in a mash tub, for 14 days when it is to be drawn off; and to every gallon of liquor put three pounds of lump sugar: when dissolved, cask it, and after working, bung it down. In about six months it will be fit to drink, when it should be bottled and tied down, or wired, if it is intended to be kept more than one year.

PEDIGREE OF IMPROVED SHORT-HORNS.

Stockton, Oct. 10, 1821.

Sir,—The Bull Hubback being now pronounced the *grand cause of improvement*, instead *of the main root* of the Ketton and Barmptons,—so celebrated above all other Short-horns,—it behoves every breeder in the kingdom to prove his own stock related to this wonderful animal (if he can); which I conceive it by no means difficult for almost every breeder in this district to do, as no bull (as I will shew) has been more easy of access. He served three years at W. Fawcett's, near Haughton-on-Skern, at *one shilling* a cow, before the late Mr. Robt. Colling and Mr. Waistell purchased him (as we have it), "*for the sole purpose of serving feeding heifers:*" but I am now in possession of evidence to shew, that Mr. Waistell, during the nine or ten months he remained a partnership bull, had his twelve breeding short-horned cows served by him, and that he was open and free to the whole neighbourhood, during that period. Mr. Charles Colling became possessed of him in Oct. 1785; he was then rising 5 years old; his price not more than £8. 8s. (the late Mr. Robert Colling having declared his opinion to Mr. Waistell, that he was not a *good one*), and in 1786 he purchased Mr. Maynard's cow and heifer, for £31. 10s., (bidding about the same time, 50 guineas for Mr. Scott's Sockburn cow.) Mr. Charles Colling was then an established breeder. In the spring of 1790, he exhibited in Darlington market his first two yearling bulls for sale, and succeeded in selling them both; Mr. Coates of Smeaton was the purchaser of one for £26., and Mr. Robert Thomas of the other, for £23. These bulls surely may be called improved short-horns, and immediately descended from Hubback (whether Mr. C. C. and Major Rudd allow it or not); and as the latter of these bulls, which won the premium at Durham in 1793, in Mr. Ralph Grimston's name, * was the sire of the g. grandam of my cow Stranger, it will appear that my breed has perhaps as much of Hubback blood in it, as any other breed in the kingdom (not even excepting that of the Messrs. Colling), as the Sockburn cows in my brother's time had access to both these bulls; and Chapman's Son of Punch, surely, had his proportion.

But I am by no means reconciled to the idea that Mr. C. Colling himself ever thought so highly of this bull, (for he only kept him two years,) as is now so confidently held out; otherwise would he have parted with him at seven years old, *a nameless bull?* for it is well known that he was not called *Hubback* till many years after he had been sold to a gentleman of that name, at North Seaton, in Northumberland. We hear, indeed, of *Sons of Hubback*, and if ever Mr. C. had any such, the two yearlings, above alluded to, must have been of them. Not one of Messrs. Collings' own bulls (their *best bulls*, as Major Rudd has it) could call him sire; and it is surely most wonderful, that they should have never thought it worth while to keep one of his begetting. The long lines of bulls from Fuljambe (the son of the Blackwell bull) to Cecil, and from Punch to Pilot, have sprung from the loins of Mr. Hill's Blackwell bull; and that no virtue is allowed to have been found in any blood, but in this drop of the Kyloe, in the veins of Hubback, is most wonderful. Mr. Hill's bull, besides being the sire of Mr. Barker's Bull, and the Sockburn bull, was also the sire of George Coates' old bull, which won the premium in 1791. These plain statements need no comment. I am, Sir, your humble servant,

JOHN HUTCHINSON.

ON PLOUGHING.

October 3, 1821.

Sir,—About 30 years ago, on the banks of the Gallawater, four oxen and two horses used to draw, or rather drag, a thing we called a plough; and a surly old fellow, who held it, was sometimes scolding the driver, sometimes the oxen, sometimes the horses, and sometimes beating or thrashing all the seven of us. Such scenes, however, I believe, are for ever passed away from the south-east of Scotland, and it is now about 25 years since that these oxen have been fattened on turnips and clover, and sold to the butcher; the sulky old man become hedger and ditcher; and the driver (now the Gallawater Ploughman) and the two old horses, on the same farm, and in the same field, with a better plough, turn over the soil in a much better manner. The conclusion which I have derived from facts, is this,—that two horses, with a proper plough, may plough properly any soil: not that two horses shall turn as big a furrow as four or six, but that when deep ploughing is required, two two-horse ploughs will do more, and better work, than a four or six horse plough;

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* *Cattle* bred *in a peaty country, are very subject to scour, and the above must be restricted to cattle which already scour on high land; then the* change *may remedy the evil, and* vice versa. *Scouring young cattle, put on marshy pastures, where the soil is clay, and the fences ditches, are generally cured of the disorder by eating the tender tops of* reed.—Probatum est.—*Ed.*

† *By* flat sole, *we mean a sole not rounded, ridged, or rough with nail heads, and not* a horizontal sole. *As to* stating the arguments justly, *we confess that we have made some alterations in our correspondents' letters, for the purpose of enabling ourselves to perceive more clearly what appeared to be meant; believing that this would be the better way of conveying that meaning to our readers. The subject itself is very difficult to state in a definite manner, and those who have it in their power to turn to No.* 560 *(June* 8, 1818), *will find an article quoted from Mr. Gray's Plough-wrights' Assistant, in which the cause of the bended wheel is well defended, but the defence very hard to be fully understood. Once more we think the principal interest of this subject lies in the conclusion of the Legislature as to the turnpike act; the abuses of the* broad-wheel system, *we hope, will put Parliament on its guard against future exemptions, the main effects of which are trouble and imposition.—Edit.*

* *See Durham Register.*

I therefore cannot help feeling very sorry to see so many scores, and so many hundreds of English farmers, still persist in using a great number of animals in dragging ploughs of a bad construction. I do not know that I have ever seen a plough better calculated for turning a furrow than Mr. Small's ; I mean his modern chain ploughs. But though a good plough be a very good thing on a farm, a good ploughman is a great deal better. The setting of the irons, regulation of the traces, collars, and other harness, with skilful driving, are of the utmost consequence ; one man may plough with much less fatigue to himself and horses, than another, though with the same implement, for when a plough is properly set, the draught should go in a certain angle from the plough-foot to the horse's shoulder; so that the horses do actually lift the plough and furrow, rather than drag forward a dead weight. To convince a ploughman of this, let him take a full bag of corn by the mouth, and he will drag it across the floor with tolerable ease ; but tie a long rope to the mouth of the bag, and be at the far end of the rope, it will break his heart to drag it but a few yards : this case is not exactly similar, but it is near enough. Hence the attaching of wheels to ploughs is founded upon ignorance, and calculated to promote ignorance and idleness in the ploughman. I grant, that a pair of wheels would do a deal of good in helping the bag of corn across the floor ; but carrying the plough across the field is not ploughing the field ; for it is very evident, that the more a wheel becomes useful to a plough, the worse the construction of the plough must be : the irons of such plough must be forever endeavouring to get into the centre of the earth, and the wheels as constantly endeavouring to bring them to the surface ; for my part, I should as soon think of having a pair of wheels to my scythe, as to my plough. Where soils are light, the difference is not so much perceived, because the draught, though greater than it need be, is still moderate ; but it is a great pity that farmers on stiff soils, should imitate their example. A great broad-wheeled wagon with eight huge horses, may shew that the owner is a person of consequence, but will never, in my opinion, shew his sense, as a carrier of goods to the best advantage. To conclude, the two-horse ploughs cost less in horses, provender, hands, harness, and repairs of all sorts ; but the time and trouble of the ploughman to feed, clean, harness, and unharness, the long teams, ought not to be left out ; besides the double, triple, and quadruple chance of accidents; for if even one horse wants to make water, the whole team must wait on him : add to this, that a long train of horses walking up every furrow, batters the subsoil like the bottom of an artificial fish-pond, so that the communication between the bowels of the earth and the atmosphere is completely blockaded, and the soil on the surface is as it were, spread upon a floor of ice, so cold and damp is the puddled mass. In short, I look upon good ploughing as the first step towards good farming, and the depth of a farmer's judgment may be measured by the depth of his plough furrow.

I am, Sir, your very humble servant,

A GALLAWATER PLOUGHMAN.

On Sunday se'nnight a lark, pursued by a hawk, lighted for shelter on a woman who was sitting in a field near Torthorwald. The hawk was so rapacious as to make several attempts on its intended prey before it could be driven off. The lark, apparently sensible of the protection it had received, remained with the woman, and is now lively and cheerful though, confined in a cage.—*Edinburgh Star.*

A bullfinch in the neighbourhood having been kept in a cage for several years, has lost the original colors of its plumage entirely. Some time ago it became dull and sickly, and beginning to cast its feathers, the moulting and metamorphosing process continued till now its liveliness is resumed ; but its color all over is a jet black.—*Montrose Chronicle.*

Swimming Match.—Thursday a swimming match took place in the Serpentine River, between Mr. F. O. Martin, the celebrated Nottingham swimmer, and Mr. T. P. Ramsden of high swimming repute at Rochford. The match was for fifty guineas to swim four times up and down the river. It was well contested for some time, Mr. Ramsden keeping the lead ; but on turning round for the last time he grew tired, and was passed in grand stile by his antagonist, who won the match amidst the shouts of thousands. Mr. R. sunk when within five yards of the winning post, but was immediately rescued by a waterman ; he soon recovered, and was able to walk away.

Pedestrian feat.—On Tuesday last Thomas Peters, a broken down soldier, having no employ, undertook to run 16 miles in two hours, with no other hope of reward than what the observers chose to contribute. The distance was marked out on the Tewkesbury road, one quarter of a mile out and one quarter of a mile in. He started precisely at four o'clock, and performed the first nine miles in 59 minutes ; the last seven he completed in 48 minutes ; thus running the 16 miles in 13 minutes within the two hours. The collection for the poor fellow was but small —*Cheltenham Chronicle.*

On Friday a person walked from Chertsey to the market house in Guilford (a distance of twelve miles), in two hours, for a wager of £50. He appeared rather distressed on entering the town, but had five minutes to spare on completing the distance.

The second steeple-chase match between Captain Smith and Mr. Honywood took place on Tuesday from Hawthorne-wood, Surry, to Kingslake, for 200 guineas aside. The distance is 20 miles. It was done by Mr. Honywood in one hour and twenty-nine minutes over a rough country. Captain Smith took a circuit through Cranewood, and swam across the Beddel river, his adversary keeping the high ground in the direction of Leith Hill. Each had many leaps. The Captain lost the match by about a quarter of a mile, his horse refusing to leap a hedge.

An awful instance of sudden death occurred a few days since near Worthing. A gentleman of the name of Home, having occasion to paint his house, incautiously remained in it, contrary to the advice of his friends, during the time the men were employed. On the fourth day he was seized with vomitings, and complained of a giddiness in the head. A physician was immediately sent for, but before he could arrive, the unfortunate man was senseless. Every means which medical skill could devise were tried for his recovery, but without effect. He has left a wife and two children to lament his untimely death.

NAVIGATION OF THE POTOMAC.

HOUSE OF REPRESENTATIVES.—*May* 3, 1822.

Mr. Mercer delivered in the following Report, which was read and ordered to lie on the table:

The Committee of District of the Columbia, to whom was referred sundry memorials from the inhabitants of Pennsylvania, Maryland, and Virginia, praying the aid of the federal government towards the improvement of the navigation of the river Potomac, have according to order, attentively considered the object of the memorialists, and beg leave to submit to the House of Representatives, in relation thereto, the following Report:—

That, by the concurrent acts of the Legislatures of Maryland and Virginia, a company were incorporated in the year seventeen hundred and eighty-four, on the recommendation of General George Washington, for the improvement of the navigation of the river Potomac, and its principal branches, above tide water. The seventeenth and eighteenth sections of this act prescribed the conditions upon which the tolls granted to the company should be exacted, and a limitation to the duration of their charter. By a suplimentary act those conditions were modified, and the period limited for the completion of the navigation of the river, in the mode prescribed, has been from time to time, extended by subsequent laws of Maryland and Virginia.

No legal inquiry has ever been regularly executed, so far as your committee are informed, in order to ascertain whether the "Potomac Company have complied with the terms of their charter." After the expenditure of their subscribed stock, to the amount of $311,555 ; of the tolls of more than twenty years' collection ; and of the farther sum of $174,000, borrowed by the company of the state of Maryland, of the banks of the District of Columbia, and of private individuals, it is universally acknowledged that the navigation of the river is most defective.

In all this period the stockholders have received but one inconsiderable dividend; and their stock will not command in the market, where, however, it is seldom found, a moiety of its nominal value.

It is, in fine, now ascertained, that, without further and very considerable aid from the states immediately interested in the navigation of the Potomac, or from the general government, the great object sought to be attained by the improvement of that navigation—a commercial intercourse, through this channel, between the western and Atlantic states, will be entirely defeated.

Will the Congress of the United States interpose, and have they the power to prevent a result so deplorable?

A hasty survey of the general map of the United States, and a brief recurrence to the theory and policy of the federal government, with their practical illustration by the structure of the Cumberland road, would seem almost to supercede the necessity of any comment from your committee on the importance of the navigation of the Potomac, or the power of Congress to provide for its improvement.

One of its southern branches, itself a considerable river, rises to the southwest of Staunton, in Virginia, and is capable of connecting, by a navigable canal, the geographical centre of that state, in territory the largest of the Union, with the market towns of the District of Columbia. Emptying into the Potomac above the chief obstructions of its navigation, the Shenandoah, like those navigable streams which descend from the northwest, through the limestone valleys of Maryland and Pennsylvania, depends, for an outlet to the ocean, on the improvement of the navigation of the main river to a considerable distance above tide water. These branches, when the stem shall have been improved, are capable of affording, with the Potomac, an internal water communication, exceeding, in extent, six hundred and fifty miles.

The value of this navigation to the ample and fruitful territory washed by the tide, or drained by the tributary streams of this noble river—a territory comprehending four counties of Pennsylvania, seven of Maryland, and eighteen of Virginia—exceeding, in extent and population, some of the largest states of the Union, should not be disregarded. It sinks, however, into comparative insignificance, when this river is contemplated as a necessary link of the shortest chain of communication between the Atlantic and western states. The enlightened policy which seated the federal government on the banks of the Potomac, indicates its peculiar adaption to this purpose; and nature has facilitated its accomplishment by a rupture of the many ranges of lofty mountains, including even the great ridge of the Allegany, in the direction which such a purpose requires. It is no longer questionble but that the head waters of the Ohio may be mingled with those of the Potomac, by a tunnel or subterranean canal, not exceeding two miles in extent; and the produce of the soil and industry of the west, after ascending the Youghiogany, find a safe and commodious channel; thence, to the valley of Savage Creek, and through it, the north branch, and the main river, to the Chesapeake and the Atlantic.

The patriotism which exults in the approaching connexion of the Hudson with the northern lakes; in the efforts of the Carolinas and Virginia, to unite, by short portages, the sources of the Santee and Pedee with those of the Tennessee, and of the Roanoke and James rivers with the Great Kenawha, cannot but regard this central river of the Union with peculiar interest.

Notwithstanding all its claims to general favor, the Potomac is, however, exposed to the serious disadvantage of being, throughout its whole course, the common boundary of states, whose enterprise and resources are attracted to other objects of internal improvement, some or all of which are rivals of this; and all its markets, once the property of those states, are by the cession of the District of Columbia to the general government, confided to the exclusive guardianship of Congress.

With an almost boundless authority over the District of Columbia, the government of the United States acquired new, urgent, and daily increasing interests in the navigation of the Potomac.

In the rapid improvement and consequent security of the seat of the Federal Government from foreign danger, are involved, not only the preservation of the property and lives of its inhabitants, the accommodation and comfort of its numerous public functionaries, but, in no small degree, the national character and honour. The most deplorable calamity of the late war would, doubtless, have been averted, had the capitol of the United States been encompassed by the dense population of a large city—by such a population as would unquestionably succeed the contemplated improvement of the navigation of the Potomac. And if sordid views may be allowed to mingle with considerations of such inestimable consequence, it may be added that, with the growth of the numbers and opulence of a great commercial emporium, would, of necessity, arise a corresponding appreciation of the value of all the disposeable public lands in the city of Washington; consisting of more than five thousand vacant lots, and now computed at near two millions of dollars, it is not unreasonable to suppose that their value would be quadrupled by a prospect of their early occupation and improvement.

Your committee are aware that this calculation may be, indeed has been, impugned, by referring to the value of the commodities which have hitherto descended the Potomac. The very origin of this report, in the present imperfect and hazardous navigation of the river, suggests an *answer* to this objection. It may be corroborated by another; the tolls of a single turnpike, in length but thirty four miles, leading to the town of Alexandria, have exceeded in one year twenty-five thousand dollars, or very near a fourth of the annual interest of a sum sufficient to complete the navigation of the Potomac, from its tide-water to the Cumberland road. This great and costly work, itself, so honourable to the wisdom and beneficence of the United States, awaits this improvement to yield all that it has promised to the Union.

If the relative expense of transportation, by land and by water, be properly estimated, the completion of a canal, from the tide to Cumberland, would have the effect of approximating the seat of government to within a few miles of the Allegany; while the extension of this canal, at some future period, would occasion that formidable barrier to disappear, in the intercourse of the eastern and western states. It is by such a canal that your committee propose to supply the place of the present defective navigation of the Potomac. As this river affords the shortest water-line of communication between the tide of the sea and the eastern base of the Allegany, so is its current the most rapid, when compared with that of the other great rivers which have their sources in this chain of mountains. Wherever the science of civil engineering has been long and successfully applied to inland navigation, your committee are assured that the use of the natural beds of wide and rapid rivers has been superceded by a resort to navigable canals, extending along their margin, and fed by their currents, until met by the tide. Without a recourse to this expedient, the ascent of the Potomac by a loaded boat cannot be overcome, it is believed, at an expense less than that which attends the transportation of equal burdens over like distances, along the ordinary roads of the adjacent country. The consequence must be, that every downward cargo is chargeable with double freight, exclusive of insurance against the repeated hazard to the boat and the lives of those who guide it, of total destruction.

From a navigation, so impeded and so dangerous, all bulky commodities are, of necessity, excluded, and yet, it is from the transportation of such articles, that the chief part of the revenue of any canal is derived. In the table of tolls, annexed to this report, it is apparent that the entire estimate of the commodities which ascend the Potomac, although they comprise a greater value in less bulk, bears but a very small proportion to the amount of those which descend the river; while these must be regarded as of very inconsiderable value, when compared with the numerous and diversified productions of the extensive and fertile country which should find its market on the banks of this river.

Can it be owing to any other cause than the defective navigation of the Potomac, that the buildings of Washington are cemented with the lime of Rhode Island, and warmed, in winter, with the mineral coal of James river? The last is dug and raised, at much cost, transported twelve miles over land to the port of shipment, and thence conveyed by a circuitous navigation of five hundred more to the District of Columbia. The former is calcined by fuel of a value, enhanced by its scarcity, and its vicinity to a market, in which it is applied to various uses, and it is afterwards transported, even farther than the latter, with the superior hazard of the sea, augmented not a little by the peculiar character of the commodity itself. What would be the tolls upon the transportation of these necessary and bulky commodities, beds of which, inexhaustible in quantity, and excellent in quality, are found in the vicinity of each other, near the surface of the earth, and on the very margin of the Potomac, if a navigable canal connected Cumberland with Washington; and how rapidly would the demand for them increase with the progress of the population and wealth of the markets of the Chesapeake; The consumption of salt, by which the east would pay, in part, for these valuable minerals of the west, in the extensive grazing country of the Allegany and its parallel ridges, would give increased activity and profit to this intercourse. In the channel of communication between the works of Onondaga and the waters of the Ohio, this heavy commodity is now subjected to a most circuitous water conveyance, by vessels of different capacities and drafts, and that transportation itself is interrupted by several portages.

Iron every where abounds, and copper has already been found in the mountains drained by the Potomac. Their valleys yield luxuriant crops of hemp and flax, and the forests of oak and pine which climb their summits, are destined, it is to be hoped, to supply future navies with the means of raising the blockade of the Chesapeake.

It was by this channel of intercourse, imperfect as it now is, that, during the late war, Louisiana supplied the Atlantic states with sugar; Tennessee with cotton; and Kentucky with saltpetre, that necessary material of defence. Were this communication as perfect as it can be rendered, an enemy, who succeeded in closing the mouth of the Mississippi, in order to paralyze the industry of the west, would have, also, to win from the fleets of the Union, the possession of the Chesapeake. Through this channel, in case of war with a formidable naval power, the west would not only supply the east with the valuable products of the Mississippi, but make its return for the wines of Africa and the various manufactures of Europe and Asia, in the cloths of Steubenville and the cutlery and glass of Pittsburg. Should such a war be as extensively conducted on land as on the ocean, the cost of the contemplated canal, would be saved by the United States in a single campaign.

Your committee are aware that other channels of communication across the Allegany may be greatly improved, and rendered tributary to the general welfare of the United States, both in peace and war; in the latter, by the additional security which they would afford to the commerce of the interior, and by the vigour which they would impart to all the operations of the Federal Government for the common defence. On the other hand, it will readily be conceded, notwithstanding the preference which may be given, by local interests, to other objects of internal improvement; that whatever facilities the commercial, social, and political connexion between the remote extremes, and the seat of the General Government of so vast a republic as the United States, must have the same propitious influence, as would result, were it otherwise practicable, from contracting the extent of its territory, without reducing the number, impairing the wealth, or abridging the comfort and happiness of its people. To all the friends of liberty in America, who regard the state government as essential parts of the republican system, erected on a scale so broad, as to create alarm for its duration, or who, with no less truth, regard the union of those states as the bond alike of their freedom and independence, *every measure*, which has the effect of diminishing the extent of the one, while it multiplies and strengthens the ties of the other, must be viewed with earnest solicitude. But another inquiry remains—Has Congress the power to insure *its* success?

So numerous and so various are the benefits accruing to every nation from inland navigation, so urgently have the United States been invoked by the character and genius of their institutions, to diffuse their advantages over a territory, which nature has eminently fitted to receive them, that a former Congress sanctioned, by their voice, a system of internal improvement co-extensive with the wants of the nation.

Your committee are not unmindful of the impediment which arrested the progress of that system, and could not expect success in their present effort, in behalf of one of its objects, if the proposition which they are about to submit to the House of Representatives were liable to similar objections. The committee have studiously sought to guard against their application, and confidently hope that they will be found to have succeeded.

Two proposals have already been offered to the House, in the course of the present session of Congress, by the Committee on Roads and Canals, in relation to the Potomac. Neither of them interferes with the plan for the improvement of the navigation of that river, which this committee have presumed to recommend. One of them, embraced by a resolution for the appointment of commissioners to survey the route and estimate the expense of a navigable canal, seems to your committee to be, in a great degree, superseded by the annexed report of the Principal Engineer of Virginia, to the Board of Public Works of that state; and as an incorporated company already exists, with ample authority to make the contemplated improvement, there does not remain any apparent necessity of waiting for the prosecution of this work, until a more extensive system of internal improvement be devised by Congress.

The committee simply recommend the combination of the proceeds of sales of the public property in the City of Washington, which, according to the original plan of the City, was designed to be sold, with such sums of money as the Legislatures of Maryland and Virginia and the citizens of those and of the adjacent states may voluntarily subscribe, for the purpose of extending a navigable canal from the foot of the Little Falls of the Potomac, to the commencement of the Cumberland Road. They propose to annex to this public and private subscription, the condition, that the Potomac Company shall previously assent, with the approbation of the Legislatures of Maryland and Virginia, to such alterations of their present charter, as will admit the United States, those states, themselves, already interested in the stock of the company, and the new subscribers, to participate, on fair and equitable principles, in their future revenue. These alterations would, among other obvious effects, provide for the payment of the debts of the Company, and for the reduction of the nominal, by some liberal reference to the actual value of their present stock.

In order to obviate the necessity of selling the public lots in the City of Washington, before the contemplated improvement of the navigation and commerce of the District of Columbia shall have caused the anticipated appreciation of their value, as well as to complete the canal in the shortest possible time, without drawing immediately for large sums upon the public Treasury, the states of Maryland and Virginia, and the individual subscribers of new stock, your committee propose, that the United States shall borrow, on the public faith, and a specific pledge of all the public lots reserved for sale, a sum, receivable in semiannual instalments, sufficient to complete the entire work in three years, from the date of the first instalment.

Referring to the annexed report of the chief engineer of Virginia, and computing the total cost of the contemplated canal at two millions and a half of dollars, your committee recommend that an amount of stock, in the capital of the Company, not exceeding half a million, be reserved to pay the debts of the Potomac Company, and to reimburse the present stockholders, including the states of Maryland and Virginia; and that the above loan be limited to two millions of dollars, and applied to defray the expense of the additional works required to complete the canal.

Your committee have reason to believe that two millions of United States stock, bearing an interest of four per cent. payable semi-annually, and irredeemable for twenty-eight years, could be sold, in Europe or America, at par. To provide for the payment of the interest, and the final reimbursement of the principal of this debt, it is proposed, that the United States shall subscribe one million of dollars to the stock of the Potomac Company, on the conditions already suggested, the states of Maryland and Virginia six hundred thousand dollars, and individuals the remaining four hundred thousand; that, on the stock thus subscribed, there shall be charged an annuity for twenty-eight years, of six per cent. per annum, payable semi-annually; four per cent. of which shall be applicable to the payment of the interest on the two million loan, and two per cent. to the creation of a sinking fund, to be invested, from time to time, as received, in productive stock, in order to provide for the redemption of the principal of the loan, at the expiration of twenty-eight years.

Such is the scheme which the committee presume to recommend for extricating the Potomac Company from their present embarrassments, and accomplishing a work which, unassisted, they cannot effect, although of inestimable importance to the public.

Complicated as this scheme may, at first, appear, it involves, in its prosecution, the exercise of no other power on the part of Congress, than, 1st, the power of selling the public lots in the city of Washington, which were acquired expressly for sale. 2dly, That of borrowing money on the public faith, and a specific pledge for its repayment; and lastly, the application of the public treasure to an object of general welfare; or the investment of it in the stock of an incorporated company, expected to yield an annual income.

The committee will not swell this report, already too far extended, by arguments to demonstrate, that all these powers are vested, by the constitution, in the Congress of the United States, either expressly, or by natural implication.—They involve neither the incorporation of a private company, nor the condemnation of the lands of individuals, within the territory of any state, for national purposes. They do not extend the jurisdiction of the General Government over the persons or property of the citizen, nor purpose to derive, from the assent of any one or more states, any power which has not been granted to the Federal Government by the people of the United States.

Your committee forbear to answer all the objections which this, like any other plan of internal improvement, may be expected to encounter. They are contented to set against such objections some of its peculiar advantages; that, connected with the Cumberland road, it will complete a great national object, calculated to perpetuate the Union, and to promote the prosperity and glory of the United States; that while it accomplishes this object in the short compass of three years, its cost will be distributed over the revenue of eight and twenty; that this cost will be greatly reduced by the credit which enables the American Government to negociate its loans at so low a rate of interest as four per cent; that, by the completion of the entire work in so short a period, that loss of interest on unproductive stock, which most canal companies have encountered, and which, in some similar enterprizes, has exceeded the principal of their stock, will be prevented; that if the dividends of the Potomac Company shall, after the completion of the canal, yield six per cent. per annum to the stockholders, they will, from that moment, have nothing further to pay for their stock; and after the lapse of twenty-eight years, or possibly a shorter period, they will be found to have paid but nine per cent. of its par value, for a property which, in all human probability, will have more than doubled that value. One of the most prominent and best features, perhaps, of this plan, for accomplishing an object of general welfare, is, that it combines in its execution private with public wealth, and thus effects such a co-operation of individual interest with public good, as will ensure, in the original construction as well as the subsequent repairs of the canal, vigilance, economy, and fidelity, in all the disbursements of money, qualities so often required in vain, in the expenditures of public money, on public account.

Should the loan, on which this plan eventually depends, be negociated abroad, it will be, because it leaves for more profitable application, in America, the sum which it is designed to withdraw from other channels of wealth and enterprize.—If it charge a debt upon posterity, it must be again repeated, that it is to complete a work, as durable as that Union to which the people of America must look, now and hereafter, for the security of all their political and social happiness. Your committee submit the following resolution;

Resolved, That the committee of the District of Columbia be instructed to report a bill in conformity with the principles contained in the preceding report.

* * *

From the Manufacturers and Farmer's Journal.

We have seen a circular letter from Liverpool (received by the Flora) dated August 12, 1822, containing certain statements of the situation of the Cotton Market, in Great Britain, from which we gather the following general results—

The supply of American Cotton for the year 1822, including that on hand on the 1st of January is estimated at—bags	403,350
The consumption and export at—bags	307,200
Estimated stock on hand, January 1, 1823—bags	96,150
The supply (including old stock) of East India cotton,	210,030
Consumption and export—bags	95,000
Estimated surplus, January 1, 1823,	115,030
The supply of the cotton, including that on hand, January 1, 1822 is estimated—bags	203,934
The consumption and export estimated at	153,400
Estimated surplus, January 1, 1823	50,534

The estimated supply of West India, Demerara, &c. including stock on hand, January 1, 1822, is—bags	51,484
Estimated consumption and export,	42,600
Surplus (estimated) January 1, 1823,	8,884
Total estimated supply, including old stock,	873,798
Total estimated consumption and export —bags	603,200
Total estimated surplus, January 1, 1823 —bags	270,598
The supply of all sorts for 1821, was—bags	897,139
The consumption and export, bags	542,319
The surplus stock, January 1, 1822,	354,820
Estimated surplus, January 1, 1823,	270,598
Decrease of stock, within the year—bags	84,222

Editorial Correspondence.

CLIMATE AND SOIL ON THE BORDERS OF LAKE ERIE.—*Extract to the Editor.*

PHILADELPHIA, July 20, 1822.

Dear Sir,—I have received your favor of the 18th inst. informing that you had forwarded my letter to your friend, Mr. Wright, who had sailed for England.

You have enquired whether the winters, where the property I have offered for sale is situated, are not too long, requiring stock to be fed for too great a portion of the year? I answer, by no means. The whole extent of Erie county upon the Lake, say forty miles in length, and nine miles deep to the ridge which runs parallel with the lake, and divides the waters of the Alleghany and Ohio Rivers from those of Lake Erie, affords a delightful climate, and gives certain and very abundant crops of small grain. I speak from experience, having been stationed on the bank of Lake Erie more than twenty years since, and having visited it very frequently since. It is a remarkable fact that the crops of corn have been uniformly abundant since the first settlement of the tract of country to which I have alluded above, and that there has not been a single failure—not a single instance of the corn having been injured by frost. This is, no doubt, to be attributed to the influence of the air from the Lake, in a great measure. As to grass or grazing land, Erie county is not excelled by any part of the United States. I doubt, indeed, if it is equalled. The winters commence in December—generally about the tenth of the month—from that period, till about the twelfth of February, it usually snows once in three or four days, so that grain and grass will be completely protected from the severe frosts. From the twentieth of February, the snow begins to disappear, and thaws very gradually—Early in April, cattle that are not used find a sufficiency of vegetation, even in the woods, to keep them in good heart. I will venture to assert, that if cattle were turned out so early in any part of Pennsylvania, east of the mountains to forage for themselves, they would perish.—Rain seldom occurs during the winter months. The atmosphere is dry and very favourable for cattle. Frost, late in the spring, rarely takes place—and I have seen cucumber vines growing vigorously in the latter part of October.

Extract of a letter from Charles Champion, Esq. to the Editor, dated Bluthe, near Bawtry, England, 30th August, 1822.

I am delighted to find the bull and two heifers which I sent to you in April arrived safe; and that they were approved by yourself and your friend, and that you obtained premiums of plate for them. I hope sincerely that Col. Lloyd will be fortunate with them, and that he will recollect the advice Mr. Wright took the liberty of giving him respecting their management, and then I have no doubt, they will answer his wishes.

My bull Aide-de-Camp, which obtained the first premium in London, was only 22½ months old when he was shewn, and he weighed upon Messrs. Pickfords' machine, which I have no doubt is correct, the astonishing weight of 16 cwt. 2 qrs. 3 lbs.—his girth round his chine was 7 feet 7 inches—his length from shoulder to rump 5 feet 6 inches, and his height to the top of his chine, 14 hands 1 inch; from the above dimensions no doubt he would if slaughtered weigh 90 stones of beef, of 14 lbs. to the stone: this is a surprising weight for an animal only 22½ months old.

We have lately had another Agricultural meeting at Doncaster, where I was again fortunate in gaining premiums and sweepstakes, amounting to 43 guineas over my own stakes. I obtained the yearling bull premium and sweepstakes, with an own brother to Aid-de-Camp, *Brigade Major*, which some of my friends thought superior to his brother—although he is as good, I do not think he is superior.

THE FARMER.

BALTIMORE, FRIDAY, OCTOBER 11, 1822.

MARYLAND CATTLE SHOW—No. 3.

We are very much gratified to learn that active and well directed exertions are making for the Agricultural Exhibition, to be held at Easton, in Talbot county, of this state, on the 7th and 8th of next month. The farmers of that Shore are co-operating, zealously, to give eclat and utility to the occasion, and no one acquainted with the intelligence and energy of our fellow-citizens in that section of the state, can doubt their success in laudable enterprises, such as this; the very spirit and object of which, tend to banish discord, and to insure unity of feeling and action—an association to improve the art of cultivating the earth—to give encreased efficacy to labour—in a word, to augment, by a given quantum of toil and expense, the means of human subsistence, comfort and happiness—must command the approbation and good wishes of every honorable mind. Reference to this paper of the 23d of August, will shew the amount of Premiums, and the objects for which they have, as we think, been most judiciously offered. We are glad to learn, that many gentlemen of this Shore, both amateurs and practical farmers, propose to go over. This is as it should be. Let us, however, bear in mind, that this will be their *first* attempt, and we should graduate our expectations accordingly. The ball is then to receive its first impetus; it will, we trust, roll on from year to year, acquiring strength as it goes. Those, moreover, who have never seen that Peninsula, will be gratified with the sight of a country altogether different in its topographical features, from any thing we are accustomed to see in other parts of the State. The roads are quite level, uninterrupted by gates, and always in good condition—and every neighbourhood being ramified by navigable streams, produce is transported to market at comparatively little expense—and the farmer, with his gun and his net, may every day spread his table with fish or fowl—We say nothing of Eastern Shore hospitality—*that's proverbial!*

☞ The Devon Bull, advertised by the Editor, *is sold.*

PRICES CURRENT.—CORRECTED WEEKLY.

Best white wheat, $1 40 to 1 45, and much wanted—Red wheat, $1 30 to 1 34—White corn, 65 to 66 cts.—Yellow, 60 to 65 cts.—Rye 65 cts. —Oats, 44 cts.—New corn, shelled, 55 cts.—On the cob, $2 62½ to $2 75 per bbl.—Barley, 75 cts —Hay, $20 per ton—Rye straw, $10 do.—Wharf flour, $6 50—Shad, No. 1. trimmed, $7 50 to $8—No. 2, $5 50 to $7—No. 1, untrimmed, $7—No. 2, do. $6—Herrings, No. 1, $3 25 to 3 37—No. 2, $3 to 3 12—Beef, Northern mess per bbl. $10 to 10 25—Baltimore, prime do. $9 to $9 75—Hams, 12 to 15 cts.—middlings, 10 to 11 cents.—Other articles same as last report.

TOBACCO—No sales, very dull.

Speed the Plough.

The subscriber (late President of the Berkshire Agricultural Society) convinced of the importance of disseminating *improved* Agricultural Implements, and that it can only be effected, in an efficient manner, through the medium of persons who are *practically* conversant with, and able to judge of their true merits from experience, proposes to open a REPOSITORY for the sale, *on commission* of all kinds of Agricultural Implements and Machinery.—*likewise*, for Prime Seeds, and approved Agricultural Books.

It being the object of the subscriber to bring into use such articles only as possess real merit, it is proper to remark, that he will offer none for sale but such as he may be already acquainted with, or which he shall have previously tested by experience.

Letters, *post paid*, will be duly attended to, and all favors gratefully acknowledged.

THOMAS MELVILLE, jr.

Pittsfield, (Berkshire Co.) Sept. 2, 1822.

☞ By giving the above an insertion, *our Brethren of the Type* will not only render a public service, but aid the laudable views of a person, than whom, no one in Berkshire has done more towards the promotion of Agriculture and Manufactures.

VALUABLE STOCK,

FOR SALE AT THE FOLLOWING PRICES, VIZ:

A full blooded Alderney Bull, 4 years old	$150
Two half blooded do 2 years old	30
One half blooded Devon and Alderney, 1 year old	80
Three half blooded Devon Bulls, 1 year old	30

Persons wishing to possess the Coke Devon Stock, may have prize bull calves of 2 months old, at the following rates:

Full blooded	$100 each
Three quarter do	40
Half do	15

The excellence of these cattle for symmetry of shape, kind feeding, gentleness of temper, quantity and quality of milk and butter, facility of taking fat, and for action and strength as draught oxen, is unrivalled. Apply at the Farm of Mr. Richard Caton, Brookland Wood, to

J. G. WALMSLEY, *Manager.*

Bakewell Sheep.

For sale, twenty-five half blooded Dishley ewes—they are young, and by a very fine ram, procured from Mr. Barney. Price, $5 per head —apply at the office of the American Farmer.

PUBLISHED BY JOHN S. SKINNER.

HORTICULTURE.

POMARIUM BRITANNICUM,

An Historical and Botanical account of Fruits, known in Great Britain, by Henry Philips, —Second Edition.

(Continued from page 226.)

ORANGE.—CITRUS.—AURANTIUM.

In Botany, a Genus of the Polyadelphia Icosandria Class. Natural Order, Bicornes.

The China, or sweet oranges, with which this country is now so amply supplied, and at such moderate prices, that all classes of society enjoy them as perfectly as if they had been indigenous to the climate, were not known to the ancient Europeans. They were first brought into Europe by Jean de Castro, a celebrated Portuguese warrior, who made them a present to the Condé Mellor, the king of Portugal's prime minister, who was only able to raise one plant from a great number that were brought to Europe. This tree, which was planted in 1548, and from which all the European orange-trees of this sort were produced, is said to be now alive at Lisbon, in the garden of Count S. Laurent.

The Romans had endeavoured to cultivate the citrus before the Christian era, for the beauty of the tree and it's medicinal qualities but, as it has already been observed in the history of the lemon, they could not succeed in the time of Pliny, who says, (*book* xvi *c.* 32.) "The Assyrian pome-citron-tree will not bear fruit out of Syria." The same author, in his 12th book, *c.* 3. informs us that the Romans were acquainted with the Persian and Median pome-citron; but he never mentions it as a fruit to be eaten: the kernels, he states, were in particular employed by the Parthians, to sweeten the breath. In his 13th book, chap. 15, we are informed that the Romans had tables made of the citron wood, which they procured from Mauritania and Cyrenaica, in Africa.

Some authors are of opinion that the orange was the golden apple of the Hesperides; and as the ancient Europeans could not propagate it, was said to have been taken back by Minerva. The fable states, that Hercules, to obtain information of this garden, seized Nereus, god of the sea, in his sleep, who directed him to Africa. If he had to cross the deserts of that country to obtain this fruit, the allusion of it's being guarded by a dragon, is both natural and just.

About the eleventh or twelfth century several varieties of the orange were cultivated in Italy, from whence they were taken to Spain and Portugal; therefore the sweet orange, soon after it was introduced, became plentiful in these countries, where there were already abundance of stocks to graft on. Gerard notices in his work, which was published in 1597, that orange and lemon-trees grew on the coast of Italy, and in the islands of the Adriatic; and on the coast of Spain they were, says he, in great quantities, as well as in certain provinces of France, which lie upon the midland coast. At the present time, these trees are cultivated in Italy to so great an extent, that there are almost forests of them. Prince Antonius Borghese, at his palace near Rome, has upwards of seventy sorts of orange and lemon-trees, among which are some very rare kinds: it is a fruit so much esteemed in Italy, where it thrives well, that apples, pears, and cherries, have almost become extinct in that country.

The delightful perfume of an orange-grove is such as to scent the air for miles; and the tree gives a succession of flowers during the whole summer, on which account it is cultivated in all green-houses, and large orangeries have been built for the express purpose of housing these trees: the most magnificent one is that of Versailles, built by Louis the XIVth.

Oranges were known in this country in the time of Henry the VIIIth, but I find no account of the orange-tree being cultivated in England prior to Queen Elizabeth's reign. The Seville orange-tree appears to have been first planted the year before the East India Company was incorporated, and two years previous to the return of Sir Francis Drake, our first circumnavigotor. It is said to have been introduced by Sir Francis Carew, and first planted at his seat at Beddington in Surrey. Chancellor Bacon, who wrote about twenty years after this time, mentions the housing of orange and lemon-trees in this country to keep them in the winter. He also states, that if the seeds of oranges be sown in April, they produce an agreeable salad.

Henrietta Maria, queen of Charles the 1st, had an orange-house and orange-garden at her mansion, Wimbleton Hall, in the parish of Wimbleton, in the county of Surrey; and by an estimate and survey which was made in the month of November, 1649, for the sale of that property, by order of the Parliament, we find how highly orange-trees were estimated even in those turbulent days. It is described as follows:—

"In the north side of which sayd oringe garden, there stands one large garden-house; the outwalls of brick, fitted for the keepinge of oringe-trees, neatly covered with blue slate, and ridged and guttered with lead; the materials of which house, with the greate doores, and the iron thereof, with a certaine stone pavement lying before these doores, in nature of a little walke, four foote broad, and seventy-nine foote long, wee valew to bee worth £66. 13*s.* 4*d.*

"In which sayd garden-house there are now standing, in squared boxes fitted for that purpose, fortie-two oringe trees bearing fayre and large oringes, which trees, with the boxes, and the earth and materials therein feeding the same, wee valew at ten poundes a tree, one tree with another, in toto, amounting unto £420. 0*s.* 0*d.*

"In the sayd garden-house there now allsoe is one lemon-tree, bearing greate and very large lemons, which, together with the box that it grows in, and the earth and materialls therein feeding the same, wee valew at £20. 0*s.* 0*d.*

"In the sayd garden-house there now allsoe is one pome citron-tree, which, together with the box that it growes in, and the earth and materialls feeding the same, we valew at £10. 0*s.* 0*d.*

"There are also belonginge to the sayd oringe-garden six pomegranet-trees, bearing faire and large fruits, which, togeather with the square boxes they growe in, and the earth and materialls therein feeding the same, we valew at three poundes a tree, one with another, in toto, £18. 0*s.* 0*d.*"

There were also eighteen orange-trees that had not borne fruit, which, with their boxes, were valued at £5 a tree, one with another, £90.

A white marble fountain, with a statue of Diana upon it, and "a fayer led cestern belonging to it, and a chanelled pavement," were esteemed to be worth £7.

"Another fountain of white marble, with a statue of a mermaid, with the cestern, &c." were valued at £10.

Orange-trees have been grown in the southern parts of Devonshire for more than 100 years past. When trained to walls, they produce large, handsome fruit, but not of equal value to the lemons grown in the same situation. Most of these were raised in this country from seeds, and they are thought to be more hardy than trees Imported; but the orange-trees which are brought every year from Italy, and sold principally at the Italian warehouses in London, are as large as those of our own growth would be in twenty years. With proper care, these trees will have good heads, and produce fruit in about three years. The Mandarin orange was not cultivated in England until 1805.

We have lately seen orange-trees imported from the south of France, which have arrived in small tubs; and so well packed, that the fruit and blossoms remained on the trees when they reached the neighbourhood of London.

In the Philosophical Transactions, No 114. there is a very remarkable account of a tree standing in a grove near Florence, having an orange stock, which had been so grafted on, that it became in it's branches, leaves, flowers, and fruit, three-formed; some emulating the orange, some the lemon or citron, and some partaking of both forms in one. These mixed fruits never produce any perfect seeds: sometimes there are no seeds at all in them, and sometimes only a few empty ones.

The Maltese graft their orange-trees on the pomegranate-stock, which causes the juice to be of a red colour, and the flavour to be more esteemed. The Rev. Mr. Hughes, in his Natural History of Barbadoes, mentions the golden-orange as growing in that island. He describes the fruit as a large fine orange, of a deep colour within, from whence it derives the name Golden Orange. He adds, "This fruit is neither of the Seville or China kind, though it partakes of both, having the sweetness of the China mixed with the agreeable bitterness and flavour of the Seville orange."

The juice of oranges is a pleasing acid, and good in inflammatory and putrid disorders, both acute and chronical. The juice contains an essential acid salt, mixed with much mucilage. The salt may be obtained in crystals, by diluting the juice, clarifying it with whites of eggs, and using evaporation. In this way a saline extract may be made, capable of being preserved, and possessed of the same medicinal qualities as the juice, which is said to be very powerful in the scurvy. When Com. Anson sailed round the world, his men, who were afflicted with the scurvy, were surprisingly recovered from that disorder by the oranges they found in the island of Tinian.

Orangeade, an agreeable drink made of orange-juice, water, and sugar, may be given, says Lemery, to people in the height of a fever.

The Seville orange is esteemed far preferable for medicinal purposes, and the blossoms of this species are the most odoriferous: the leaves are also used in medicine. The yellow rind of these oranges, separated from the white fungous matter under it, is a grateful, warm, aromatic bitter, often used as a stomachic and corroborant. It is warmer than the peel of lemons. of a more durable flavour, abounds more with a light, fragrant essential oil, which is lodged in distinct cells on the surface of the peel. The rind of the China orange has a weak smell, and is seldom employed for medicinal purposes. Seville oranges also produce the best marmalade, and the richest wine: it is from the flowers of this kind of orange, that orange-flower water is distilled. These oranges are often pre served whole as a sweetmeat, and are justly admired.

The seeds of the orange kind will be found, on nice examination, different from the seed of any other fruit. They have been anatomised by the curious, and, with the aid of a good microscope, are found to be almost as wonderful, in their formation, as the human frame when dissected.

Seignior Francisco Lana, in his Prodromus to some philosophical discoveries, tells us, that there is a way of producing oranges, without sowing or planting the trees, only by infusing the flowers in oil of almonds; for that this oil will, every year afterwards, at the proper season, produce both flowers and ripe oranges.

PEACH.—PERSICA, OR AMYGDALUS.

In Botany, a Genus of the Icosandria Monogynia Class.

All the ancient authors agree that the peach-tree is a native of Persia; and it appears that the fruit was thought to be of a poisonous nature. It is evident there had formerly been traditionary tales of this fruit having been sent into Egypt to poison the inhabitants. Columella says, in his tenth book :—

And apples, which most barbarous Persia sent,
With native poison arm'd (as fame relates):
But now they've lost their pow'r to kill, and yield
Ambrosian juice, and have forgot to hurt;
And of their country still retain the name.

Pliny, in his 15th book, chap. 13, mentions, that they had been stated to have possessed venomous qualities, and that this fruit was sent into Egypt by the kings of Persia, by way of revenge, to plague the natives; but he treats this story as a mere fable, adding, that the name of Persica evidently bespeaks them a Persian fruit. Cato has not mentioned them; and Pliny adds, that it was not long since peaches were known in Rome, and there was great difficulty in rearing them. He informs us they were brought from Egypt to the isle of Rhodes, where they could never be made to produce fruit; and from thence to Italy. He says, moreover, that it was not a common fruit in Greece or in Natolia. This author states again, in book 23, chap. 7, that he considered it the most harmless fruit in the world; that it had the most juice with the least smell of any fruit, and yet caused thirst to those who ate of it.

Peaches were evidently cultivated in France at an early period, as Columella continues his account of this fruit, by stating,—

Those of small size to ripen make great haste;
Such as great Gaul bestows observe due time,
And season, not too early, nor too late.

Pliny says, book 15, chap. 12, "as for the French and Asiatic peaches, they bear the name of the regions and nations from whence they come."

It is stated that the peach-tree was not cultivated in England before the year 1562; and by whom it was first introduced, or from what country it was procured, we have no authentic account, although Gerard wrote his work soon after, which was published in 1597, wherein he describes the white peach, the red peach, the yellow peach, and the d'avant peach, and adds, "I have them all in my garden, with many other sorts."

The peach-tree, he continues, "soone cometh vp; it beareth fruit the third or fourth yeer after it is planted, and it soone decaieth; and is not of long continuance." From this account, and finding it in the list of fruits, published in the year 1557, by Thomas Tusser, who mentions peaches, white and red, there can be little doubt but that it was introduced as early as the reign of Henry the Eighth. I am decidedly of opinion that it was brought into England, from Italy, by Wolf, the king's gardener, in the year 1524, as at this time we find that he brought the apricot from the latter country.

Of this deliciously melting fruit we have now a great variety, from the small nutmeg peach which ripens in July, to the large October peach, which is more agreeable to the sight than the palate.—This fruit has been almost equally multiplied in its varieties with the apple, by sowing the stones, and lately by the ingenious method of impregnating the blossoms. T. H. Knight, Esq. President of the Horticultural Society, has procured a new peach by this operation: he impregnated the pistillum of the blossom on an almond-tree, with the pollen of the peach-flower; and this almond, when planted, produced a peach-tree instead of one of its own kind, and has since ripened peaches.

The peach varies so much in quality, that many sorts are not worth the growing; it is therefore to be hoped that we shall soon have them exploded, and the better varieties cultivated in situations most congenial to their tender nature. At Montreuil, a village near Paris, the whole population is exclusively employed in the cultivation of peaches, which has maintained the inhabitants for several ages; and the consequence is, that they raise better peaches than any other part of France affords.

I have often observed, that the finest flavoured peaches have been gathered from trees of the greatest age; and I have met with many instances of these trees bearing amply when they have been from forty to sixty years old. These trees generally yield a crop, when younger ones fail.

Father Hennepin, a religious missionary, who first described the regions of Louisiana in his voyages down the Mississippi, gives an account of the numerous peach-trees which he observed in every direction in that part of America; and as the latitude is the same as that part of Asia, of which these trees are the natural production, there can be no doubt but they are indigenous to Louisiana as well as to Persia, although in many parts of America the peach is regarded as a foreign fruit, it having been introduced from Europe before Louisiana had been explored.

This fruit is now cultivated with such success in some parts of North America, that it is not uncommon to see orchards containing 1,000 standard peach trees, which are so productive, that the fruit is used to fatten swine: from a single orchard have been procured, after the pulp is fermented and distilled, 100 barrels of peach brandy.

Peaches are forced with considerable success. These of necessity must bear a high price in the market, so long as glass continues an object of heavy taxation. The expense of fuel, it appears, will not be so excessive, since the heating of flues by steam promises to answer.

It is observed, that the best peaches of every kind are red next the sun, and of a yellowish cast towards the wall: the pulp should also be of a yellowish tint, and juicy; the skin thin, and the stone small. To have them in perfection, they should not be gathered until they will fall into the hand by the slightest touch of the finger.

This is one of the fruits in particular which is recommended to be eaten in the morning, in preference to the usual time of dessert. Brookes says, "peaches agree well with persons of hot constitutions and costive habits, especially if they are eaten in a morning fasting."

The flowers of the peach-tree are used in medicine: when made into a syrup, they are given as an aperient to children, and are recommended as a great destroyer of worms.

It should be observed not to get the flowers from those peach-trees that have been grafted upon almond-stocks, as the flowers partake of the property of the stock, which greatly alters their virtue. The plum is a purgative, the almond not at all so.

Gerard also says, "the leaves of the peach-tree boiled in milk, will destroy the worms in young children."

The young leaves are used by cooks to flavour blanc-mange, custards, puddings, &c.; and a liquor resembling noyau is made by steeping peach leaves in white brandy, and, when sweetened with sugar-candy, and fined with milk, it is difficult to distinguish it from the flavoured cordial of Martinique.

Michaelmas is the time recommended for the winter pruning of the nectarine, as well as the peach-tree, when, with little attention, the blossom-buds will be known from the wood-buds; the latter being less turgid, longer and narrower, than the blossom-buds. In shortening the branches, observe to leave a wood-bud at the end instead of the fruit-bud. Care should be taken to nip off the ends of the strong shoots in the month of May, which will cause them to throw out new boughs in every part of the tree, as it produces its fruits from the young wood, either of the same, or at the most of the former year's shoot.

Peach-trees are often injured by a desire to retain too full a crop on the branches, which not only prevents the present fruit from coming to maturity, but, by exhausting the tree, prevents its fruiting in future years. When the peach has attained the size of a small gooseberry, the trees should be carefully thinned, leaving the fruit not nearer than from four to six inches to each other.

From the wood of the peach-tree the colour called rose-pink is procured.

PEAR.—PYRUS.

In Botony, a Genus of the Icosandria Pentagynia Class.

The accounts we have of this fruit are of great antiquity, as the pear-tree was consecrated to Minerva previous to the olive.

The earliest writers mention it as a fruit growing abundantly in Syria and Egypt, as well as in Greece; and it appears to have been brought into Italy from these places, about the time that Sylla made himself master of the latter country; although there is no doubt but the Romans had several kinds of this fruit before that time. Virgil speaks of pears which he had from Cato; and Columella mentions a considerable variety of pears. Pliny writes of them in his 15th book, chap. 2, as being then exceedingly numerous in Italy: "some have," says he, "no other name than the country from whence they came, as the Syrian, the Alexandrine, the Numidian, the Grecian, the Picentine, the Numantine, &c. &c.:" but of all the pears, he mentions the Crustumine as the most delicate and agreeable; next to that the Falernian pear was esteemed, and so called for the abundance of juice it produced, which he compares to wine. The Tiberian pears were so named because they were the sort Tiberius, the emperor preferred; others were named after the persons who had introduced or cultivated them; some from the season when they ripened, as the barley pear, &c.; and many from their odour, as the aromatic and laurel pears. "Some are reproached," says he, "with the name of proud pears, because they are earliest ripe, and will not keep:" there were winter pears, and pears for baking, &c. "Both pears and apples," continue this author, "have the properties of wine, on which account the physicians are careful how they give them to their patients; but when sodden in wine and water, they are esteemed wholesome." Again he states, book xxiii. chap. 7, "all pears whatsoever are but a heavy meat, even to those in good health, and the sick are debarred from eating of them; and yet, if they are well boiled or baked, they are exceedingly pleasant, and moderately wholesome; when sodden or baked with honey, they agree with the stomach."

Some pears were used as a counterpoison against the venomous mushrooms; the ashes of the pear-tree wood are also used for the same medicinal purpose.

The wild pear-tree, as well as the crab-apple, appears to be a native of this country, where it is often found growing, particularly in Somersetshire and Sussex.

At what period the cultivated pear was first brought into this country we have no account; but we may surmise that the Romans did not neglect the propagation of this fruit when they were masters of Britain. The pear is mentioned by all our early writers. Gerard says, in his time, to write of pears and apples would require a particular volume; every country, says he, "hath his peculiar fruit; myselfe knowe some one curious, who hath in one peece of ground, at the point of three score sundrie sorts of pears, and those exceeding good; not doubting but, if his minde had been to seek after multitudes, he might have gotten togither the like number of those of worsse kindes. Master Richard Pointer," he says, "has them all growing in his ground at Twicknam, near London, who is a most cunning and curious grafter and planter of all manner of rare fruits; and also in the ground of an excellent grafter and painful planter, Master Henry Banbury, of Touthill Street, neere vnto Westminster; and likewise in the ground of a diligent and most affectionate louer of plants, Master Warner, neere Hornsey Down, by London; and in divers other grounds about London."

Miller mentions eighty varieties of the pear in his day, and, at the present time, they are so much increased, that Mr. Lee, of Hammersmith, assured me that he possessed 213 kinds of pear-trees. We trust that, while the Horticultural Societies are seeking for new varieties, those of established fame will not be neglected. It is desirable to have our orchards planted with a variety, that we may have some for all seasons and for various purposes; but it is equally to be wished, that the best of each sort should be selected, not only of the dessert kinds, but those for baking and preserving, as well as those for making perry, which is one of the justly admired British beverages.

————And taste revived,
The breath of orchard big with bending fruit
Obedient to the breeze and beaten ray,
From the deep loaded bough a mellow shower
Incessant melts away. The juicy pear
Lies, in a soft profusion, scattered round.
A various sweetness swells the gentle race,
By nature's all-refining hand prepared,
Of tempered sun, and water, earth, and air,
In ever-changing composition mixed.

Thomson.

Perry is considered the best liquor that can be drunk after a surfeit of mushrooms.

An agreeable wine is made from the wild pears and crab-apples.

In general pears are windy, and improper for weak stomachs: those are best that are quite ripe, and have a sweet juice, and then they are seldom noxious; unless eaten to excess.

(Brooks.)

The pear-tree is liable to be much injured, if pruned by those who do not understand the nature of it. The blossoms are commonly produced from buds at the extremity of the last year's shoots, and, as these are often cut off by the unskilful pruner, it prevents their producing fruit, and causes the boughs to send out new branches, which overfill the tree with wood. The summer is the best time to look over pear-trees, and to remove all superfluous and foreright shoots, which would too much shade the fruit. If this be carefully done, they will require but little pruning in the autumn.

Pears that are to be kept for the winter use, should hang as long on the trees as the state of the weather will allow. They should then be put in a heap, in an open and dry situation, for about ten days; then wiped with a dry woollen cloth, and packed close from the air and moisture. But to keep this fruit in it's greatest perfection, small earthen jars should be selected, about the size of the pear, which should be packed separately in clean oat chaff, and tied down with skin, or brown paper cemented with pitch. These jars should then be packed in a chest, or dry closet, with the bottom upwards. Pears are found more generally productive when grafted on quince stocks, than upon those of their own kind or the white thorn.

The timber of the pear-tree is of a yellowish colour, and is used for making carpenters' tools, measuring rulers, picture frames, and a variety of purposes. Gerard says, "the timber of the wild pear is very firm and solid, and good to be cut into moulds." The plates in his book were cut out of this wood, as were, says he, "breastplates for English gentlewomen."

AGRICULTURAL HISTORY AND POLITICKS.

It must not be supposed that, because we have inserted an article in this number on the causes of the present deplorable condition of the people of Ireland—that therefore we mean to intermeddle in *foreign politicks*. The distresses of that gallant and generous nation are sufficient to awaken the sensibilities of every feeling heart; but it is not *here*, that *we* may be permitted to expatiate on such subjects, we can here allow ourselves to view them only as a portion of the history of the times, connected with, and bearing upon the *interests of agriculture*.—In that country we behold the singular spectacle of an industrious nation *literally perishing* in the midst of *an abundance* of the necessaries of life—the fruit of their own labours, and the propitious influence of Heaven! The causes of such political phenomena, belong to the science of *agricultural* politicks, and deserve to be investigated. Such a state of things cannot exist under a wise administration of the publick strength and resources—there must be "something rotten in the state of Denmark," and what has happened there *may* happen here, in process of time and under bad legislation, remote as may appear all existing analogies—would we avert evil *effects*, we must by the aid of *every* light study their *causes*—hence it becomes the now free agriculturists of America, above every other class in the world, to make themselves familiar with the *history* of the agricultural prosperity and decline of other nations; a legislative policy which, in its incipient influences may scarcely be felt by *us*, may reduce our children to ruin and beggary, may convert them into hewers of wood and drawers of water for more acute and more favoured classes—and hence it is that we are willing to appropriate a due portion of our journal to discussions which, without due reflection, might be thought too abstract. The resumption of specie payments in England has been followed by prodigious distress, and extensive ruin to the productive classes in moderate circumstances.—The same *coincidence* has occurred in this country. The commodities which are the product of agricultural labour, especially have fallen, and thousands who were in debt, but in *a thriving condition*, have been ruined, because, owing to the scarcity and increased value of money, the produce of their industry will not go in some cases half so far towards meeting their *money* engagements, as it would have done prior to the resumption of specie payments. While men of overgrown estates, whose fortunes consisted in *money*, are growing yet richer with compound acceleration.

In this condition of the agricultural community, their commodities depressed in the market, and the price of imported articles which they consume, enhanced by duties to encourage domestic manufactures; we read in a morning paper before us, that owing to the late unparalleled drought the owners of a celebrated cotton manufactory in Massachusetts have netted a profit of *only* 12½ *per cent.* for the last *six months*, instead of 15 per cent for the half year as heretofore!!

What we have said may serve as *texts* for our correspondents who have more leisure, and are more profoundly read than we, in political œconomy, and in what has been happily designated by one of our most able and esteemed correspondents,—"*the morals of Agriculture*." On these texts we shall be very happy to hear from any of them, pro or con, provided their sermons be as all sermons should, of moderate length and in a spirit of charity and good temper.

Edit. Am. Far.

IRISH DISTRESS.

Birmingham, June 26, 1822.

Sir,

I beg leave to trouble you with a letter on the subject of Irish Distress, which I have received from a gentleman of large landed estate in Ireland, and which I request the favour of you to insert in your Journal. It cannot fail to be interesting to all your readers. At the same time, you will, perhaps, permit me to request the attention of your readers to a letter which I published in your Journal of the 15th May, 1820, wherein I flatter myself that I proved that the disturbances which have since arisen in various parts of Ireland, must necessarily follow from the restoration of the ancient standard of value, and that the distress which now exists in that country must be the inevitable consequence of the same destructive cause. When Parliament thought proper to restore the ancient measure of value, and with that of course the ancient *prices* of value, they ought, as a matter of common honesty and common prudence, to have restored also the ancient *obligations* of value. The *monied prices* of property and labour are the only *means* out of which the *monied obligations* of the country *can* be discharged. When, therefore, Parliament adopted measures to reduce those *monied prices one half*, they ought in common honesty, to have reduced also the *monied obligations one half*, at the same time. In this manner, equal justice would have been rendered to all parties; and whatever might have been the good or the evil of low nominal prices, the same good or evil would have been equally participated in by every class of the community. The *monied* debts, rents, tithes, and taxes, which are charged *by law* upon the *monied* prices of property and labour, being thus reduced *one half* by legal enactment, at the same time that those *monied prices* were also reduced *one half* by legal enactment, the consequence would have been, that the monied burthens would still have borne the same relation to the monied means as they bore during the war, and the action of the whole social machinery would have been preserved on the same footing, rendering every one his due, without partiality or injustice, and not lacerating and destroying *one half* of the community for the unjust aggrandisement of *the other half*. The landlord would have received *half* the monied rent which he received during the war, the clergyman would have received *half* the monied tithe, the creditor *half* the monied debt, and the King *half* the monied tax; but under this *half*, the same *value* would have been comprised as was comprised under *the whole* during the war, and thus every class of society would have been preserved on the same relative level, without the least injury or injustice to any one. But in reducing *price* one half, without reducing equally the *component parts of price*, in reducing thus the *monied means* without reducing correspondently the *monied charges*, Parliament has thrown the whole burthen of this great change upon the active and useful classes of the community, and has even contrived that it shall *double* the fortunes of the *unproductive classes*, until such period as the outcry or bankruptcy of their unhappy victims shall compel them to make a just reduction in their enormous and iniquitous demands.

It is true, that this reduction of the *nominal terms* in which men had been accustomed to estimate their fortunes, and the monied values of their property and labour, would have been disagreeable to the feelings of many individuals. They would have *fancied* themselves injured, although they would not, in reality, have been so. Each individual would have possessed just the same security, and the same command over the necessaries and luxuries of life, as he possessed on the average of the ten years ending the late war; and thus all the injury which could possibly have arisen to any party would have been perfectly *ideal*. The King, and his creditors, retainers, and dependants would have experienced the same *nominal* reduction—their incomes, as would have been experienced by the land-owners and manufacturers, and their creditors, retainers, and dependants; but the same reduction would have been common to all. And if *low prices*, and the low estimation of national values, are beneficial, all classes would have equally participated in that benefit; or if such *low prices* are injurious, all classes would have sustained their just proportions of such injury. The *lessee* would not have become bankrupt to the *lessor*; the *mortgager* would not have been sacrificed to the *mortgagee*; and the *creditor* would not have become the arbiter over the fate of the *debtor*. The lessor would have received his proper proportion of the produce of the farm; the mortgagee would have received his just and rightful share of the estate; and the creditor would have received his just and rightful share of the effects of the debtor. All these great rights and interests would have been secured to the rightful parties just as well under the *low* estimation of national values, as they were during the war under the *high* estimation of those values. But in reducing *one part* of the national values without reducing *all other* parts; in reducing the *fictitious means* of the productive classes, without at the same time reducing correspondently the *fictitious charges* of the unproductive classes, the Legislature has condemned the former to perish without hope, under the arbitrary exactions of the latter.

Under this view of the subject, which would shew the necessity of compelling all parties to contribute equally to the national object of restoring *low prices*, it is probable that such national object may not appear quite so desirable as it has hitherto appeared in the eyes of many persons, who have been endeavouring to accomplish it by a measure which has confiscated the capital of others at the same time that it has *doubled* their own. It may possibly be thought, that when the present generation of men have been born and bred up, or reared to manhood and advanced age, under the habits and associations which a high estimation of national values had occasioned, it was not wise or expedient to adopt a measure which should necessarily break up all those habits and associations, and whilst it carried *change* into every mind, should carry also a sense of ideal injury into every heart.

But if it was not wise or expedient to reduce by law the *component parts of price*, at the same time that *by law* we reduced *price itself*; and if it was still more unwise and unjust to reduce the *monied means* without reducing correspondently the *monied charges*, what other measures ought we to have adopted, or ought we now to have recourse to? I have repeatedly shewn in your Journals, Sir, that we ought either to have continued the paper currency of the war under proper *limitations* and *obligations* or otherwise to have adopted a *new* metallic standard of value, depreciated in the same degree as the practical currency of the country had become depreciated during the war. By reducing the weight of our ancient metallic coins *one half*, by alloying their quality, or by doubling their price, we should have obtained a metallic circulation which would have given us a *real cheapness* of all commodities, at the same time that it would have preserved all the *nominal* high prices of the war, and would have secured the rights and interests of all classes, without outraging the prejudices of any.

It cannot be said, that in thus coining *ten old Mint shillings* into a pound sterling, we should have done any injury or injustice to annuitants or creditors, because their annuities and credits were contracted in money which did not contain any intrinsic value whatever; and therefore, if the quantity of silver or gold contained in the instruments of money is to be any measure of the justice or injustice of discharging obligations contracted in such money, the annuitants and creditors would still have received a hundred times *more intrinsic* value than they are in reality entitled to. They would have received *ten old Mint shillings* as the intrinsic value contained in every pound sterling of their credits or annuities, for which they never advanced one single farthing of intrinsic value. All the value which they had ever advanced was *representative value*, and of this description of value every one would have received the exact amount that he was in reality entitled to, at the same time that he would also have received a very heavy security in *intrinsic value* which he was *not* entitled to.

Here would have been a real wholesome and beneficial cheapness of British manufactures secured at once, without difficulty, injustice, or distress. The high *nominal* British prices would thus have been realized upon a just and practicable standard. They would have been brought down at once in *metallic value* to the continental level, at the same time that they would have been preserved in *nominal value* at the British level, upon which all British obligations had been founded, or to which they had long become accommodated.

In this manner, all British interest would have been brought to contribute, in just and equal proportions, to the grand object of obtaining a metallic coinage; but, in the present mode of proceeding, the whole burthen is contrived to be thrown upon the productive classes of the community, and the very ruin and destruction of these classes is made the means of a most unjust and unnatural aggrandizement of their unproductive rivals.

But if this mode of obtaining a metallic circulation was not deemed advisable, and if no other metallic standard whatever but the antiquated standard of 1791, would have satisfied the rapacity or the prejudice of Jews and Lawyers, there was still another mode by which even that object might have been obtained, without injury or injustice to any one. If a *prospective* action had been given to the metallic standard instead of a *retrospective* action; if it had been adopted from any given day, and all obligations contracted after such day had been ordered to be discharged in such standard, leaving the obligations contracted in the paper standard to be discharged in the paper standard, in this manner we might have restored the metallic standard of 1791, or even the standard of William the Conqueror, which was about as applicable to the existing relations of society, without the least difficulty, injustice, or distress, towards any class of the community. For a short time, whilst the accounts and obligations of the paper standard were being settled and wound up, we should, of course, have had *two prices*, but we should have experienced no difficulty in that, nor any more inconvenience than is experienced in Russia, Jamaica, and other countries, where *two prices* exist. The paper standard, and the metallic standard, would quickly have found their due relations to each other, and would have discharged each other's obligations accordingly. In this manner, every man's rights and interests would have been properly guarded; and if there was no depreciation in the paper currency, no difference would have existed between the two standards, and the one might shortly have been merged in the other; or if any difference did exist, whether 4 per cent. or cent, per cent., such difference would have effected only the proper parties. But in adopting the ancient metallic standard, and giving it a *retrospective action*, in first inducing the nation, for twenty years, to contract prodigious public and private obligations in a *fititious* standard, and then compelling all such obligations to be discharged in a *real* standard, we have committed an act of gigantic injustice, in comparison with which, as Lord Carnarvon justly observes, "all the robberies of the French revolution sink into nothing." We have passed an *ex post facto* law, which confiscates the whole property of the farmers and land owners; which compels the merchants and manufacturers to toil for years, and to reap *ruin* as the reward of their labour; and which, by loosening and disorganizing all the ties and sympathies which hold the fabric of society together, prepares the sure and not far distant destruction of the whole.

Reverting to the situation of unhappy Ireland, Sir, it may be asked, why England is not equally distressed, if indeed it is true, as I have proved in your Journal, nearly the whole of the present Irish distress is attributable to the unjust measure which I deprecate.

The capital of the English farmers at the peace, was at least ten times as much as that of the Irish farmers, who, as I have said before, are in general little cultivators, occupy only five or ten acres of land. The English farmers are, therefore, enabled to go on for many years, supporting continually a heavy annual loss; but the poor Irish farmers, and their wretched labourers are crushed more readily into the dust. Besides, *one half* of

England is brought into contact with foreign sources of prosperity, through the medium of foreign commerce, which now that British manufacturers are reduced *one half* in price, requires nearly a *doubled* quantity to satisfy the present demand. The effect of this contact with foreign circumstances is visible also in the north of Ireland, where the existence of the great linen manufactures tends to support the population in a state of comparative comfort. But your readers must not imagine, that because England holds up longer than Ireland, it will not ultimately fall into the same state. The population of England are *supplied with employment* by the continual sacrifice of the capital of the merchants and manufacturers, which is annually and rapidly going on; and they are *supplied with food* by the continual destruction of the capital of the farmers and land owners, which is still more rapidly taking effect. Sooner or later, one of these great *links* must *give way*, and probably they will both *give way* at the same time. The population of England will then be thrown upon their country, hungry and destitute, and they will have *no sister island* to relieve them.—The destruction of the present race of farmers cannot be effected without producing ultimately such a deterioration of cultivation, as must inevitably terminate in *famine*. It will be counteracted for a while by the *recruits* from the *monied classes*, who will step forward and take possession of the farms, free from the incumbrances which forced their unhappy predecessors into the workhouse or the grave. But it is not in nature that the cultivation of the land should not be injured, during the process of this gigantic "transfer of property," as the Jews *modestly* call it. The cultivation of the land *must* be *injured* during the process of this tremendous change, and that *injury must* terminate in *famine*, which no human measures can avert, and scarce any can mitigate or relieve.

Strange it is, indeed, to reflect, Sir, that the Legislature should have rushed into a gulf of this kind, without stopping for a moment to investigate its unfathomable depth! Both the Committees of Parliament, upon whose reports Mr. Peel's Bill is founded, distinctly acknowledge that they "have not inquired into the *policy*" of this mortal measure, but have confined their inquiries into the best period and means of carrying it into effect. I told Lord Liverpool at the time, that "the country was led *blindfold* like an ox to the slaughter." Why did they not remove the *muffles* from her eyes? Why did they not inquire into the "*policy*" of restoring the ancient standard of value? Why did they not shew that the *doubling* of every public and private obligation in the kingdom, and the *annihilation of rent*, would be the least of the destructive consequences which must attend it? And why did they studiously pretend, that 4 per cent. was all the reduction that it would make in the prices of property and labour, when they knew full well, that its permanent suspension had permanently *doubled* those prices? The great painter of Nature, when he represents a man attempting an object which Nature shrinks at, makes him call upon *elemental darkness*, to shelter his designs from his own eyes, and from those of Heaven.

———"Come thou *thick night*,
"And fall thee in the *dunnest smoke of hell*,
"That my keen knife see not the wound it makes,
"Nor Heaven peep through the blanket of the dark,
"To cry, Hold! hold!"

It is not for me, Sir, to insinuate that motives of this kind have animated the Legislature, and induced them to move to their design with such fatal silence and determination. I willingly give them credit for other motives, although I must be content to leave their conduct as one of the inexplicable mysteries which time only can discover; or which, perhaps, is destined to mock investigation until "Time shall be no more." I am, Sir, your obedient servant,

THOMAS ATWOOD.

(COPY.)

"SIR, *Ireland, June* 20, 1822.

"I take the liberty of sending you, by this day's post, the last Dublin paper I have received. I beseech you to read over the lamentable details its columns afford of the awful condition of this country. We are hurried on to an accumulation of horrors never yet witnessed under the sun. The subscriptions, magnificent as they were, have proved quite inadequate: famine and pestilence are extending their ravages every hour. Yet Ministers and the House of Commons, will persist in forcing on the tremendous experiment.—There is scarcely a pound note in circulation here: guineas and sovereigns have long since disappeared; a small quantity of silver and copper coin alone remain. Now, Sir, I ask, if all the provisions in Europe were accumulated in Ireland, how could the people obtain any of them, except by force? What can they earn or obtain, to give in exchange for them? Having first called on the generous and suffering people of England to remedy the mischief they have done, his Majesty's Ministers now unjustly and most wickedly attempt to lay the blame on the Irish landed proprietors. If the latter are absentees, *that* is sufficient to account for the distress; if resident, they are called tyrants and oppressors, in order to shift the burthen from the contrivers of all this ruin. The Irish landed proprietors have suffered every privation and every insult which it is possible for men to bear. I myself will challenge investigation and comparison with the most indulgent landlord in England, as to the letting of my ground and the treatment of my tenants, as far as *my* power of indulgence went. I have reduced my expenditure from luxury and comfort to bare necessaries; I have been put to upwards of a hundred pounds law costs within a few months, by persons having demands on my estate, who shew no mercy, and *share no blame*; I have been worried almost to death, and every way humbled; and at the end of all this, which is the condition of most Irish resident landed proprietors, the people are to be excited by his Majesty's Ministers to rise up against their unfortunate landlords. For many generations my family have lived here, independent and opulent country gentlemen; now, for the first time, dishonour and misery have been brought on our house by the confiscation and robbery of Mr. Peel's iniquitious Bill. And yet, I am to be pointed out to my tenants as the cause of that distress and ruin of which I am the first and most suffering victim. I anxiously implore you, Sir, not to relax in your exertions to make the real cause of all this evident to the people of England. The same degree of distress would, undoubtedly, have taken place there too, but for your Poor Laws: it remains to be seen how long even they can avert it. In this country, distress and consternation have seized on every mind; every one looks to a dreadful conclusion at no great distance of time. *Beyond all doubt, Government will have to support the entire population of Ireland before twelve months elapse, if it persist in refusing to allow a sufficient supply of legal tenders.*

"The Irish gentlemen are grossly reviled, because they do not come forward with subscriptions for their starving countrymen. In the name of reason, from what fund are they to give? A few years ago, my property gave me credit, and the punctuality of my payments confirmed and extended it. *Now*, if my life were at stake, I coald not raise £200. The small portion of my once well paid and moderate rents which I now receive, is totally swallowed up by incumbrances and demands, which, as originally contracted and intended, did not amount to more than *a fourth of my rental*. What can I give to distress? I was all my life attached most warmly to the Government of England, by inclination, habit, and interest; but I am now nearly careless of what may happen. We are told it would be contrary to the principles of political economy to revert to paper currency. What was done in 1797 to supply funds for war and slaughter, might well be done in 1822 to ensure the happiness and save the lives of millions of our fellow subjects; unless the maxims of this political philosophy are to be observed only for our destruction, and dispensed with only for bloodshed and devastation. If this be the case, it is indeed a scourge to be ruled by political economists; to have robbing and spoliation called good faith, and utter ruin a wholesome recurrence to sound policy!—But, as Junius said in his day, 'It has pleased Heaven to give us a Parliament and a Ministry, whom no argument can persuade, no experience can teach.' I have written this in haste, to be in time for this day's post, but it contains no exaggeration of our misfortunes; *that* is almost impossible. I am, Sir, your obliged and very obedint servant,

"———."

From the New England Farmer.

CIDER.

MR. EDITOR,

Cider is our natural beverage. That it is capable of surpassing the wines of other countries, is a fact frequently well attested at the tables of affluence. To facilitate its more extensive experience is the purpose of this communication.

Agriculture, of which the making Cider is a part, is the first of sciences. Its pre-eminence entitles it to the distinction of the Divine science. But much is left to the *reason* as well as the *labor* of man to exalt it to perfection; and in this economy of Providence, who can be insensible to its benignity and condescension in making us joint laborers in the accomplishment of our enjoyments? I am persuaded that you will not think this seriousness as out of place, since, in connexion with the immediate advantage, it must have been the basis of institutions for the encouragement of agricultural pursuits. In a pecuniary view, the subject is within the demonstration of arithmetic—in years of usual abundance, it may be computed, that a million of barrels of cider are made in Massachusetts, worth, in such years, a dollar each, made in the common manner; any mode of making which, without material multiplication of expense, shall enhance this price, will add the additional value to the stock of profit; and it is not extravagant to say, that even in years of the greatest plenty, like the present, it may be so improved in quality as to be advanced to ten times its ordinary price. Nor is it the epicure alone who would willingly pay for the luxurious draught—the salubrity of a pure and palatable liquor would force parsimony itself into the *economy* of its purchase. Our autumnal complaints derive, in a great measure, their existence and aliment from the use of viscous and vapid juices. The proverb, that it is better to pay the butcher than the doctor, is much exalted in its application to the present subject—it is better to comply with the terms of nature, than to endure the penalties of their transgression. The apple tree, like the vine, is dependant on man;—through his delinquency, the yieldings of both degenerate into vinengar, but on the performance of his duty, they are exalted into wine.

A finished speculation on the making of Cider, should begin with the songs of the Mantuan bard, on

"The kinds of stock, and what those kinds will
bear."

And on the methods and progress of cultivation, from the "wild disorder" of the nursery to

"The stately tree, which in autumn bends
With blushing treasures."

For,

Wouldst thou thy vats with generous wine should
froth?
Respect thy orchards;—think not that the trees
Spontaneous will produce a wholesome draught.
The plant which shoots from *seed* a sullen tree,
At leisure grows for late posterity,
The generous flavor lost."

But as these pleasing and interesting investigations are better adapted to seed-time than harvest, I will pass on to the business of the season—*the making and preserving Cider*. A clean, convenient and covered mill, is the first pre-requisite, for without such a mill, all other attentions may be frustrated. The apples should be reduced to a fine pulp. The colour of the liquor and its smoothness are both improved by laying a few hours in the trough after grinding. Lay up the pomace on the press in clean straw, without using a drop of water in any part of the process. Three or four times as much water is often used in making less than a hogshead of cider, than would be required to ruin a pipe of proof spirits. Every mean should be adopted to retain the spirituous property of the liquor—it is its life. If a cider is wanted,

"Some strong, to cheer,
The wint'ry revels of the laboring hind,
And tasteful some, to cool the summer hours,"

the cheese may be reground, with some assistance from the well.

"Water will imbibe
The small remains of spirit, and acquire
A vinous flavour."

Press the cheese gently at first, and advance slowly to the utmost power of the screw. Art now commences its operations against the "floating lee"—and in no stage of the business can they be more effectually interposed—in proportion to the clarification of the stum the tendency to an ensuing fermentation is moderated, and its dangerous excess arrested.

In turning up, as it is called, out of the tub, the grossest of the pomaceous mass is usually detained by a strainer of straw, coarser than "the goat's shaggy beard." Instead of such a strainer prepare a tunnel with moveable rims, in the form of a seive—over the bottom rim, stretch a covering of fine flannel—over the second, a covering of baize, and the uppermost overspread with drugget, with the nappy side of each pendant. These strainers will arrest on their way to the vessel, all the gross and most of the subtle impurities which tend to the agitation and vitiation of the liquor. Should the strainers choak they can be easily relieved.

We now advance to the *preservation* of the Cider, which is the principal difficulty; and after all the directions which can be given much must be supplied by discreet observation. The vinous, the acetous, and the putrefactive, are the three fermentations to which the liquor is inclined—they are, indeed, but one progressive operation, with intermediate pauses. The first is an effort to free itself from a farther association with the fruit, and to excite its own spirit, and is closed with a calmness which marks an intermission of the endeavor—an advance to the second, which converts into vinegar, is restrained only by the due ascendancy and retention in the body of the liquor of the spirituous quality excited and quickened by the first—the last is produced by an irreclaimable foulness. The intermission between the two first is short, and has been considered the critical moment for the successful interposition of art, and racking, fumigation, salt-petre and roach-alum, have been specifics relied upon; but more is depending *on the internal condition of the liquor*, than on these prescriptions, or on any other consideration. Ciders of a good stamina, purified and protected from the internal and external occasions of its injury, by an attention which ought to be as common as washing down a hog before cutting it up, will never depreciate into sourness; nor will any application reclaim that which sunk under the pressure of its inherent impurities, or lost its virtues by the inattention of its keeper. In respect to racking, however, if it be ineffectual for the renovation of the liquor, it is seldom attended with disadvantage, and is sometimes the best expedient for its purification.

The quality of the juice of an apple in its natural state, is the prime inquiry to guide all our decisions on the flavor, the taste, the color, and the durability of cider at maturity. Generally, the quality of the juice may be inferred from the outward appearance of the apple, as it departs from the spiritless white into the golden yellow and the gorgeous carnation. Hence,

"Let every tree in every garden, own
The *red-streak* as *supreme*."

"The pippin, burnish'd o'er with gold," is but a grade below. But general rules have their exceptions, and on the present subject a surer criterion than outward show may be derived from internal examination—any apple contains a rich fluid, suitable to make a sound, palatable and exhilirating cider, which, on breaking, emits an active fragrant flavor—is not over abundantly juicy, and has a glutinous consistency. That the *crab* will make the best cider, is one of those crude conceits, that every thing is enveloped in mystery, and that we can in no other way escape the foolery which nature is playing with us, than to forsake our senses. It is all important to the full perfection of the fruit, that after having been gathered (which should be done when ripe, in dry weather, with no external injury, and before frosts shall have corrupted it,) that it be spread on covered floors to mellow, and to impart to the air an useless portion of its aqueous parts. Rains and dews hurt ripe apples even while on the trees, but they injure them much more in heaps, or spread in contact with any substance and with each other. While in either of these situations, humidity, according to its degree and continuance, retards or stays the process of maturation, institutes that of decomposition, and impairs the spirituous quality upon which the preservation of the cider wholly depends. It should be regarded too, as almost equally indispensable to the good quality of the liquor, that the fruit should be separated before grinding, from unripe and unsound apples, and from all filth. The juice of an unripe apple is even more pernicious than that of a defective one.

The place in which the cider shall now be set to subside is interesting to its welfare. In a cellar of uniform temperature through the year, it may be left undisturbed to settle and refine on its own lees. The unstoppage of cellar windows in the spring, admits an active agent to the acetous fermentation, against which, drawing off may be a safeguard. If placed in an open exposure below the freezing point,

"The hoary frosts, and northern blasts, take care
The muddy beverage to serene, and drive
Precipitant, the baser ropy lees."

In this case, racking before a removal into the cellar, (for it ought not to freeze) and again in March or April, may be necessary for the exclusion of the offending matter. The difference in the two modes of treatment already supposed is, that in the first, nature is left to her own unmolested operation, through which her intentions of giving to man a delectable draught, will (if they have not been thwarted by his own remissness) be effectually accomplished:—in the other, she is hastened on in her designs, and the precipitation of the performance requires, that certain of its stages should be seized to thrust out an enemy who is only on rest to recommence commotion.

As to refining cider with matter, it may be given as a rule, that if while on the lees, or when drawn off, the liquor is tranquil, pleasant, piercing, and yet free from asperity, it may be left to itself; or, as is more fit for turbulent acrimonious and insipid bodies, a little tasteless mucilaginous matter of any sort, as isinglass, calves feet jelly, the whites of eggs, or dissolved glue, may be infused to accelerate the precipitation of the particles suspended in the liquor.

The addition of spirit to the expressed juice is a practice condemned by *Pomona's Bard*—

"With their native strength,
Thy wine's sufficient."

A sensible observer, too, of our own, has expressed the same censure. But the subject has its qualifications. The treatment which is sometimes necessary to give a saving soundness to wine, decides against these opinions. Brandy is re-mixed with wine to give it solidity; and grapes of the greatest saccharine richness, affording a juice of nearly the consistency of honey, and easily convertible into spirit, are used to exalt inferior clusters into wine of a high quality.* In truth, it is on this point that intelligent observation must direct. Seasons of luxuriant vegetation produce a more aqueous apple than seasons of sterility. The effect of these different seasons on the quality of cider cannot have escaped notice. In the dry summers of 1805 and 6, a spirituous ascendency in the fruit generally triumphed, in cider, over mismanagement in its making—on the contrary, in seasons of great abundance, and when the fruit is distended to a great size by the watery element, the spirit of cider is reduced to so precarious a standard, that the skilful and vigilant only may boast of its possession in power and purity. In these facts, which a moment's reflection must confirm, we have the instruction we need—if the "native strength" of the juice is sufficient, an aliance should be rejected—if insufficient, an auxiliary may be received, and as the fittest is that nearest in affinity. Cider Brandy is the most suitable assistant.

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* *Other, and less notorious secrets in the trade of wine, give the same evidence. Currants, in the proportion of ten gallons to a barrel, will bring on a fermentation in cider which terminates in a neat and pleasant wine. It is the predominant spirit of the currants which effects the severe transformation.*

A Senator in Congress, profoundly instructed in the arcana of commerce, asserted in a speech, that a composition passing any where for Madeira wine, may be formed of ten gallons of that article pure, with ten gallons of Malaga wine, thirty of Sherry, and the same quantity of cider. An analysis of the component parts will shew, that the brandy in the sherry wine is the preservation of the cider in its assimilation to the first named ingredient.

From these remarks, there result as general rules in the making of cider, that apples should be ripe when gathered—that they should be housed to mellow—that they should be separated, before grinding, from the rotten and unripe, and from all uncleanness—that they should be mashed fine in a covered mill, and lay in must before laying up, a longer or shorter time according to the temperature of the weather, avoiding, while in that state, the least appearance of fermentation, which then almost immediately produces acidity—that the juice be purified of pulp and impurites, by passing several filtrations, and be undiluted by a drop of water—that it be placed in cellars, or in colder situations, and left to its own native vigour, or aided by a friendly association, according to circumstances—that it be left "to feed awhile on its own fatness," or be drawn off once or oftener, as good judgment shall guide. With these precautions, a cider incomparably better than is made with the usual inattention, may be obtained, and its consumption enjoyed.

So far I have treated the subject with a view to general use, and in this view, a leading principle may be given in a word, alike important to the connoisseur and the unlettered tillager—it is, that nature cannot be assisted in any other way than according to her own laws.

There are some distinctions remaining, which are no other than obvious refinements of the same principle.

The exact maturity of the fruit, is the first object of attention in leaving general rules and advancing to a cider than

"Wine more priz'd, or laudable of taste."

The point of perfection in the maturity of fruit can scarcely be said to be stationary for a day; a declension from that point is as detrimental as a deficiency in its attainment; the juice loses its activity, and

"From sprightly, 'twill to sharp or vapid change."

Some apples do not mature until late in winter—others, not until the ensuing spring. Of these, a cider might be made exquisitely fine. Laid in chambers through autumn, and in dry places in the cellar through the winter, exposed to the action of the air, they become enriched by the evaporation of their watery parts—but at neither of these periods is there so friendly a concurrence of the atmosphere for the making of cider as in the last month of autumn.

Assorting the apples, (for I have yet supposed them used promiscuously) is the second particular in the progress to perfection. Philips observes, that

"Some ciders have by art or age unlearn'd
Their genuine relish, and of *sundry* wines
Assum'd the flavour."

It is not possible that a commixture of various sorts could give one distinct perception to the palate. So invariably does nature preserve each kind by itself, that no two sorts can be drawn into union on the same stock. The disagreement in the juices of fruit is more or less inveterate when mixed, as they depart from sweet to sour. The mixture of an extremely sharp acid with a luscious sweet, produces an activity of opposition approaching to effervescence, nor does it cease but with the complete subjection of the mass to the acrimonious adversary. These facts suggest the propriety and necessity of keeping each kind of fruit in its own distinctness. The conclusion I should consider as securely propped in its own reasonableness, had it never been intimated by nature nor tested by experience, *that apples of the same kind*, can make the most perfect cider. In this persuasion I can anticipate the time when cider will be designated by the name of its own apple, and the nomenclature of the orchard be as familiar in our markets as any distinctions in use. The most perfect cider, then, can alone be made by an attention to these additions to the general rules.

Of bottling, the advantages are so well understood, that I have no occasion to say any thing in their recommendation; but I should not conduct the cider-maker to the most finished point, were I to omit the observation, that a perfect fineness of his liquor, and an ascendency in it of a spirit which shall repress its impatience in a close confinement, are as indispensably necessary to the preservation of his bottles as to the perfection of his drink.

Cider is to rise to more than an equality of fame with the most celebrated drinks of other climes, and the competition which will ensue in the market will give celebrity to the section of our country which shall be most successful in its manufacture. Already has this preference of place appeared, and our Herefordshires and Devonshires are in Rhode Island and N. Jersey. But it is *comparative* more than *intrinsic* excellence which may be claimed for the ciders of the Narraganset and of Newark. If the banks of the Connecticut, and the rich vales and propitious southern declivities of Massachusetts shall not bear away the palm, the fault will not be in our soils but in our sons.

"Delightful beverage! to the utmost bounds of this
Wide universe, Columbian Cider bore,
Shall please all tastes, *and triumph o'er the vine.*"

POMONA.

DISEASE IN HORSES' HEADS—IN ANSWER TO A CORRESPONDENT.

Greensborough, Sept 9th, 1822.

Dear Sir,

I observe in the Farmer of the 30th of August, information wanted relative to the disease of horses, known by the name of the Big Head.

I have seen a number of horses that were afflicted with that disease. The first I attempted to cure, was a horse about six years old, that a brother of mine obtained in the state of Tennessee—he had been subjected to the following treatment:—the duct that passes from the eye to the nose, was laid bare, or an incision made in the inlarged part of the nose, and the wound burned with a hot iron. This afforded a temporary relief. But the horse about two years afterwards, became diseased, dwindled away, and lost measurably, the use of his parts. I had him thrown and tied, then run a hot iron through his head, inserting it into the lump on one side, and carrying it through the lump upon the other. The horse in a short time, was well, and never after had any symptom of the disease. I have treated others in the same way, with equal success. I am no farrier, neither have I been able by carefully examining the head or skull of several horses, to ascertain the cause of the disease. I know that it is a morbid enlargement of the bone or the cavity, between the two plates of the bone of the head. It differs very much from the glanders. I think it certainly is not contagious. I have never heard of a mule to have it.

If this clumsy communication should satisfy F, or you think it worth a place in your valuable paper, you are at liberty to use it as you think best.

I am, Dear Sir, yours, &c. J. A. M.

ROCKVILLE (Md.) CATTLE SHOW.

The first Montgomery Fair was held at Rockville, Montgomery county, Md. on the 12th and 13th of last month.

The fair was very generally attended by the farmers of Montgomery county and of Washington county, in the district.

On the afternoon of the second day, the following premiums were awarded:

For the best three, two, and one horse barshare ploughs, Gideon Davis received the premium.

For the best shovel plough, substratum plough, and cultivator, William Brown received the premium.

For the best stallion and brood mare, Richard Brooke received the premium.

For the best bull, Washington Bowie received the premium,

For the best cow, Roger Brooke received the premium.

For the best heifer, Basil B. Pleasants received the premium.

For the best pair of broke oxen, Thomas P. Stabler received the premium.

For the best ram, Roger Brooke received the premium.

For the best ewe, John P. C. Peter received the premium.

For the best boar and sow, David Porter received the premium.

THE FARMER.

BALTIMORE, FRIDAY, OCTOBER 18, 1822.

THE UNIVERSITY OF MARYLAND AND MEDICAL COLLEGE.

We beg leave to remind our City readers that, agreeably to former notice, the next annual Session of the Medical College, in the University of Maryland, will commence on the 28th day of this month. Introductory Lectures will be *given*, by the Professors, which parents and guardians ought to hear. They will afford a glimpse of the vast range of intellectual pleasures, which their children or wards might enjoy, and should be encouraged to cherish. In this school, they would "learn to look through nature, up to nature's God"—to contemplate the mineral, vegetable and animal kingdoms by the lights of science, in new and harmonious relations—to discover arrangement in seeming discord, to trace vegetable formations from their constituents, and how to mitigate those ills to which flesh is heir. And shall these sources of endless pleasure rise in our city, and flow untasted by her sons? Parents and guardians! so improve the talents which are entrusted to your hands, as that your children and wards may establish the fidelity of your stewardships.

Of this Institution, Citizens of Baltimore and the People of Maryland may indeed feel justly proud; for it is a blessing to society and an honour to our country. Our distant friends and readers will be pleased to hear, that this school may be fairly classed, at present, with the best Medical Establishments in Europe. It has risen, like our city, with unprecedented rapidity; and like her, has gathered strength with its age.—The Buildings are elegant, and we believe they are more commodious than any, that are elsewhere, devoted to the same purpose.

The Chemical Apparatus embraces not only the useful, but much to amuse: it is splendid and perfect.

The Anatomical Museum, comprises many hundred cases of morbid preparations illustrative of disease.

The Professors are our neighbours; and from a long personal acquaintance with most of them, we may have become blind to their faults; but we will, nevertheless, endeavor so to speak of these gentlemen, that no one may reproach us with extravagance, at the close of a session.

Dr. Davidge, should be regarded as the Father of the Institution. He studied in America, graduated at Edinburg, and growing familiar with many of the brightest ornaments of foreign Universities, he returned to Baltimore; and with a zeal which never tired, he perseveringly devoted himself to the formation of the present Medical College. In the earliest days of this establishment, we listened to his Lectures on the Philosophy or Institutes of Medicine, with great delight; for he brought the phenomena of life, of health and disease, under consideration, in the most captivating manner; and memory now recalls those exercises with grateful emotions. The Anatomical School in this University, was raised by his profound knowledge of Anatomy and Physiology, aided by a peculiar and extraordinary felicity of illustration, to a degree of excellence inferior to no similar school in the United States. For twelve years, he performed the arduous duties of the Anatomical department, to the great advantage of the University and the public. He has latterly, and we think judiciously chosen to concentrate all the powers of his mind, upon the general principles which govern, not only the practice of Surgery, but which attach themselves by numerous points of application, to the whole ground of medical practice. The lectures of this scientific and dextrous surgeon cannot be surpassed. And we are satisfied that the friends of medical science will contemplate his labours with unusual interest, as he has determined to occupy his mind, towards the close of a long and useful career, in the cultivation of medical philosophy.

Dr. De Butts, as a teacher of Chemical Science, is not excelled in the United States; and as a scientific man, he may be fairly ranked among the first of any country. His lectures are fine specimens of composition, simple, chaste, and beautiful; they are presented with a diffidence that leads you to esteem the author, whilst you admire his productions.—And when he offers to exhibit facts, the accuracy of his preparations, and the excellence of apparatus guarantee success. His experiments are always neat and perfect demonstrations. In his special vocation, we think him ardent to a fault—to the impairment of his constitution. But we look forward with confidence, to an increase of patronage, that may indemnify, whilst it shall prompt him to visit Europe, during a recess, and there make the personal acquaintance of eminent chemists, by whom he is at present regarded with marked respect.

Professor Pattison is now the Lecturer on Anatomy. Under the auspices of this gentleman, the anatomical department, during the last two years, has maintained the high rank, which his predecessor gave to it. Thus has Professor Pattison fully justified the high testimonials and friendly commendations, which he received in Great Britain, from men of the first respectability and learning, who knew him intimately as a gentleman, and a votary of science. Careful in his arrangements, he conveys information in a manner so lucid and impressive, as to have made his accuracy proverbial. As a surgeon he is skilful, but as a Lecturer and Anatomist, he has few equals. To him, the Institution and the public are indebted, for the best collection of morbid preparations illustrative of disease, that can be found in our country—it embraces many hundred cases of very interesting character, in a state of perfect preservation, and is most conveniently placed for the use of students.

Dr. Potter, has discharged the duties of Professor on the Practice of Medicine, from the commencement of the school, to the satisfaction of successive classes, and the enhancement of a well-deserved and previously established reputation. Of him, the illustrious Rush was wont to say, "that he believed he never had a student who "was superior in talents to Dr. Petter—that he "had never known a more philosophical mind "than his—in fact that Potter seemed to have "been *formed* a Physician." The present high rank which he holds in his profession, shews that this great master made but a just estimate of his pupil. As a Professor in our University, Dr. Potter will always create a lively interest, confer lasting advantages, and command profound attention.

Dr. Baker, on the Matéria Medica, has ever been a favourite with his class—Dr. M'Dowell, on the Institutes of medicine, is, like his own principles and worth, ever acceptable and excellent—and Dr. Hall, gives an interesting course, from his important chair.

But the best proof of the rank and talents of our medical school, is found in its rapid and constant growth, and in the number of its students. Twelve years ago, the writer was a member of its largest class, which could then scarcely boast a dozen hearers. But now this temple of science has become the chosen resort of quite two hundred and fifty pupils.—and we sincerely hope, that our highly respectable school may long continue to increase its magnitude and usefulness, in the bold ratio of its early growth, to the honour of our country and benefit of society.

We should not take our leave of the University, without a few remarks upon several Professorships, which are at present filled by gentlemen of science, whose lectures may be attended with pleasure and improvement.

Dr. Howard, is professor of Natural Philosophy, and likewise fills the mineralogical department. He has a good philosophical apparatus, and the *cabinet of minerals* has been greatly improved under his superintendance. His own collection added greatly to its value; it has since been enriched by a beautiful series of specimens, presented by Robert Gilmor, Esq., and of Swedish minerals, the gift of Col. John Spear Smith; the whole embraces already a sufficient variety for the purposes of instruction. Dr. Howard graduated in the University of Maryland. He has visited Great Britain, France and Italy, in search of knowledge; and, as one of their own sons, the people of Baltimore regard the rising reputation of this gentleman with parental complacency.

Dr. Wyatt, Professor of Theology, delivered in the session of 1820—21, a most impressive series of discourses, upon the evidences of Christianity, as a commencement to his Professorial labours, which may be resumed on his return from Europe.

David Hoffman, Esq, Professor of Law—has published a work on the study of this science, which we are told by competent judges, recommends a most judicious range of study, enforced by excellent and appropriate observations. And we hope, that this immense field, for the display of industry and talents, will soon be enlightened by discourses from his chair.

In the Arts and Sciences—Rev. Mr. Allen, A. M. Trin. College, Dublin—as Professor of Mathematics, has given proof of his knowledge and industry in this department, by an approved edition of Euclid, and an original work on Conic Sections.

Rev. Dr. Barry—Professor of Humanity, stands deservedly high, as a teacher of the learned languages, and must be always considered a valuable acquisition in the University.

But we must conclude our brief notice of this School, and its Professors—long may *it* continue to be the pride of our state, and a blessing to our country—and long, very long, may *they* live to gather and enjoy the fruit of the good tree which they have planted.

TOBACCO.

Some tobacco made by Judge Dorsey last year, sold in Europe for $52 per hundred; and some which grew in Montgomery county and sold here for $37, brought in Holland the enormous sum of upwards of $60 per hundred.

It has been suggested to us lately by dealers in the article, and other good judges, that none but dull tobacco can be made on land which has been lately enriched by clover and plaster of paris. To tobacco as well as corn plaster communicates a deep green colour, and the ripening to both is much retarded, and the colour injured. None but the brightest tobacco is now worth making, and that proves always to be the brightest which grows off most rapidly, and comes soonest to maturity.

☞ To the manufacturers of Improved Implements of Agriculture, we beg to suggest the expediency of attending the Cattle Show at Easton on the 7th and 8th of next month. The steam boat Maryland, which leaves Baltimore on the 6th, will take them and their Implements to the spot, and they already know that, as the Eastern Shore is almost exclusively a *grain country*, no district can furnish better judges of, or a better market for ingenious and useful machinery, for farming purposes.

PRICES CURRENT.—CORRECTED WEEKLY.

Best white wheat, $1 40 to 1 47—Red wheat, $1 28 to 1 30—White corn, 65 to 66 cts.—Yellow, 62 to 65 cents—New corn, 60 cents.—Rye, 65 cents—Oats, 35 to 37 cents—Flour from the wagons $6 50—Barley, 75 cents—Hay, $19 per ton—Rye straw, $12 do.—Shad, No. 1. trimmed, $7 50 to $8—No. 2, $5 50 to $7—No. 1, untrimmed, $7—No. 2, do. $6—Herrings, No. 1, $3 25 to 3 37—No. 2, $3 to 3 12—Beef, Northern mess per bbl. $17—Baltimore, prime do. $12—Hams, 14 to 16 cts.—middlings, 10 to 12 cents.—Other articles same as last report.

Sales of Maryland Tobacco—Good spangled, $20 to 22—Fine red, $8 to 14—Good Patuxent, $5 to 8—Common, $2 to 4—Inferior, no sales—A few hogsheads of Virginia sold at $7 50.

Improved Cattle, for Sale.

Near Philadelphia, September 25, 1822.

My Friend,

Having rented my farm, I wish to sell the following stock, which I raised for myself, and have not occasion for them.

A full bred Alderney Bull, two years old this month, and four Heifers, of 18 months old, selected from our best Milch Cows, all of which are now in profit by this bull, and will calve in the course of the ensuing winter—to a person disposed to purchase such a stock, such an opportunity will seldom occur.

The price for the whole is two hundred dollars. I should be much obliged by thy stating the circumstance in the American Farmer, this description of Milch Cattle, are peculiarly calculated for your Southern friends.

I am very truly thy friend,
JEREM. WARDER, Jr.

HORTICULTURE.

POMARIUM BRITANNICUM,

An Historical and Botanical account of Fruits, known in Great Britain, by Henry Philips, —Second Edition.

(Continued from page 235.)

PINE-APPLE PLANT.—ANANAS.

A Species of the Bromelia, and of the Class Hexandria Monogynia. Natural Order, Coronariæ.

This delicious fruit takes its name of pine-apple from the resemblance it bears to the cones of the pine-tree. It is considered the king of fruits, being second to none in flavour, and always appearing at table with a crown.

The ananas is an herbaceous plant, with leaves somewhat resembling those of the aloe. It grows wild, in vast abundance, in many parts of Africa and South America; and is cultivated in the hotter islands of the West Indies, where it requires but little attention to procure this elegant fruit in perfection and plenty.

In Jamaica, pine-apples have become so prolific, that they are often used to flavour rum, and a wine is made from the fermented juice of the sweeter sorts, nearly equal to Malmsey. Lunan observes, in his *Hortus Jamaicensis*, that these plants grow most luxuriantly when they are associated together; and the suckers from them are stronger and finer, than when the plants are separated at a distance from each other: by this their roots are likewise kept cooler and moister.

It is stated, that the first pine-apples raised in Europe, were by M. la Cour of Leyden; and the Sloanean manuscripts in the British Museum inform us, that the Earl of Portland had the honour of introducing this plant into England from Holland, in the year 1690.

In the Fitzwilliam Museum, at the University of Cambridge, is a painting by Netscher, of a landscape with a pine-apple, and there stated to be the first that ever fruited in England, which was in Sir Matthew Decker's garden at Richmond, in Surry, grandfather to the late Lord Fitzwilliam. Gough says also, that it was Sir Matthew Decker, Bart. who first introduced the culture of the ananas.

Brookshaw relates, that when the pine-apple first produced fruit in England, it was deemed so great a curiosity, and of so much importance, that persons of rank came from France, Holland, and Germany, to see it, but he omits to say, when and where it was first fruited. I conclude it must have been very rare, even had it in any instance produced fruit, before the year 1716; as Lady Mary Montague, on her journey to Constantinople in that year, remarks the circumstance of pine-apples being served up in the dessert, at the electoral table at Hanover, as a thing she had never before seen or heard of; and from her ladyship's rank, we may conclude that she would naturally have met with them at the English tables, had they not been very uncommon.

This fruit must have been known in England long before it was attempted to be grown here, as Lord Bacon mentions it in his Essay on Plantations or Colonies, which was published near a century before the introduction of the ananas plant by the Earl of Portand; but I am strongly persuaded that the pine-apple had been cultivated in this country at a much earlier period than that mentioned by Sloane; and this opinion has been strengthened by a curious old picture, which the Earl of Waldegrave obligingly showed me, in the breakfast-room of his beautiful residence of Strawberry Hall, Twickenham. The painting represents King Charles the Second in a garden before his palace at Ham, attended by two of his favourite breed of spaniels, where Rose, the royal gardener, is presenting his Majesty with the first pine-apple. This picture was in the collection of the celebrated Horace Walpole, whose descriptive account informs us, that it was bequeathed by Mr. London to the Rev. Mr. Pennicott, of Ditton, by whom it was presented to himself. He adds, the painting is supposed to be by Daneker. It is probable that the method of raising the ananas not being correctly understood, the plants were, by some accident, lost in this country, until they were introduced a second time.

By an engraving of the pine-apple, which was published by Robert Furber, gardener, at Kensington, in the year 1733, we may judge that the raising of pines was not then brought to any degree of perfection, as the fruit is represented short, having not more than four or five protuberances in height, and the crown appears small and weak. From the drawings of the other fruits, which seem to be from fine specimens, it is natural to suppose that this fruit was also copied from the best pine then produced.

We have now a considerable variety of this exquisite fruit, and new kinds are frequently procured by the curious from the seed, which is very small, of a kidney shape, and lodged like the seeds of berries in the tubercles; but the pine is chiefly propagated by planting the crowns or suckers, which latter come more quickly to maturity, and are therefore more generally preferred. The most rare kind is the green pine, which was brought from Barbadoes; the black pine is of late introduction. Of the older varieties, the sugar-loaf pine, with a yellowish flesh, is greatly preferred to the oval-shaped fruit of a paler colour. The Welbeck-seedling is a pine justly admired, as is the blood-pine, a variety grown by Mr. Wilmot of Isleworth, who makes the following just remark: "like the strawberry," says he, "pines would be better reduced to four or five varieties."

Dr. Wright says, pines have a detersive quality, and are better fitted to cleanse the mouth and gums than any gargle whatever.

This fruit was long confined to the tables of the rich and the luxurious, on account of the expense of raising it in stoves, but the cultivation of the pine apple is now so well understood in this country, that notwithstanding the bar made by the high price of glass, and the expense of fuel, this fruit is seen in our markets, at one fourth of the price they produced a few years back; and pine-apple ices are already become as common as those of raspberry, in the shops of the London confectioners.

Should the heating of stoves, by steam, answer to the expected extent, and the duty on garden glass be relinquished, we shall soon have African gardens of great extent on the banks of the Thames, and pine-apples cried through our streets two for a crown.

The late Sir Joseph Banks says, that it does not require the foresight of a prophet to foretell, that in less than half a century we shall have forcing houses of such an extent, that our markets will be supplied with the aki, and the avocado pear of the West Indies, the flat peaches, the mandarine orange, and the Litchi of China; the mango, (which has already been ripened at Kew, in the autumn of 1808,) the mangostan, and the durion of the East Indies, and possibly other valuable fruits.

Since writing the above account, this fruit has for the first time been imported as an article of commerce from the Bermuda Islands. The importation consisted of about 400 pine-apples of the species called the Green Providence. These were purchased by Mr. Mart, of Oxford Street, fruiterer, who informed me, that about two thirds of the quantity arrived in good condition. As this experiment has been found to answer, we may in future expect a regular supply of pine-apples, not only from the Bermudas, but also from the West India islands. I observed, that those pines which were packed with the roots, arrived in a better state than others that were cut off in the usual manner.

PLANTAIN.—MUSA PARADISIACA.

In Botany, of the Polygamia Monœcia Class. Natural Order, Scitamencæ.

This tree received its generic name in memory of Antonius Musa, the freedman and physician of Augustus, who for curing his imperial master of a dangerous disease, by recommending to him the use of the cold bath, was honoured by the senate with a brazen statue, which was placed near that of Æsculapius. Antonius was a botanist, and is supposed to be the author of the treatise, *De Herbâ Botanicâ.*

The plantain is a native of Guinea, from whence it was brought to the Canary Islands, and from thence carried to the West Indies; where it is cultivated with much care in all the islands, the fruit being regarded among the greatest blessings bestowed upon the inhabitants of that climate. Dr. Wright says, the island of Jamaica would scarcely be habitable without this fruit, as no species of provision could supply it's place: even flour, or wheaten bread itself, would be less agreeable, and less able to support the laborious negro, so as to enable him to do his business, or to keep up his health.

The fruit of the plantain-tree is about a foot long, and two or three inches in diameter; it forms a principal part of the food of the negroes, who either roast or boil it, when it becomes a palatable and strengthening diet: it is often boiled in their mess of salt beef, pork, or fish, &c.; many Europeans, when accustomed to it, prefer it to bread. When ripe, it is lusciously sweet, and makes good tarts. The Spaniards dry and preserve it as a sweetmeat, and it is thought to be the most wholesome of all confectionary. It is one of the very best foods to fatten domestic animals and fowls, giving a firmness and exquisite flavour to their flesh.

The plantain is cultivated in Egypt, and most other hot countries, where it grows to perfection in about ten months from it's first planting, to the ripening of its fruit. This tree is only perennial by it's roots, and dies down to the ground when it has fruited, after which it is cut down: several suckers then soon come up from the roots, which in six or eight months produce fruit, so that by cutting down the stalks at different times, there is a constant succession of fruit all the year.

When the plantain is grown to its full height, the spikes of flowers appear in the centre, which is about four feet long. The flowers come out in bunches, those in the lower part of the spike being the largest; each of these bunches is covered with a sheath of a fine purple colour, which drops off when the flowers open. The upper part of the spike is made up of male flowers, which are succeeded by the fruit, that is of a pale yellow colour when ripe; and the spikes of fruit often weigh upwards of forty pounds. This plant has been reared in our stoves since the year 1690.

The Banana Tree: Musa Sapientum.—This tree so much resembles the plantain, that is only known at first by the dark spots on its stem, which the other has not. This is a wholesome fruit, and is used at desserts. From it a pleasant drink is made, exceeding our cider. When baked in tarts, or boiled in dumplings, this fruit tastes like the apple: when dried in the sun, it resembles a delicious fig. It also makes a good marmalade, which is recommended as a great relief for coughs. The fruit of the banana-tree is said to comfort the heart, is cooling, and refreshes the spirits. Labat, states, that when the natives of the West Indies undertake a voyage, they make part of their provision to consist of a paste of banana, which, in case of need, serves them for nourishment and drink. For this purpose they take ripe bananas, and having squeezed them through a fine sieve, form the solid fruit into small loaves, which are dried in the sun, or in hot ashes, after being previously wrapped in the leaves of Indian flowering reed.

The fruit of the banana-tree is about four or five inches long, of the size and shape of a middling cucumber; it generally grows in bunches, weighing upwards of twelve pounds. The Spaniards have a conceit, that if you cut this, or the fruit of the plantain athwart, or crossways, there appears a cross in the middle of the fruit, and therefore they will not cut any, but break them. The Franciscans dedicate this fruit to the Muses, and therefore call it *musa*. The Portuguese call it *ficus derta*. Lodovicus Romanus, and Brocard, who wrote a Description of the Holy Land, call the bananas Adam's Apples, supposing them to be the fruit that Eve took and gave to Adam, which is as erroneous as the account of the Abbé Poyart and others, who state the leaves to be those of the tree from which our first parents made themselves aprons, as from their size, which is from five to seven feet in length, and from one to two feet in breadth, they could not have required sewing together for that purpose. These leaves are said to be as strong as parchment. The leaves of the plantain, as well as the banana, grows so rapidly, that by placing a thread, they will be found to grow an inch in an hour. The young leaves are so soft, that they are employed in dressings for blisters, &c. When full grown, they are so large that they are used as substitutes for napkins and table-cloths; when dried, they are made into mats and stuffings for mattrasses, &c.

If a knife be thrust into a plantain-tree, there will come out a great quantity of clear water, which is very rough and astringent, stopping all sorts of fluxes.

The fruit of the banana-tree has been ripened in our hothouses; but as the tree grows very tall, the size of the leaves requires more room than most gardeners are willing to allow it in the stove.

From the rapidity of the growth of the banana, it is of too porous a nature to merit the name of wood, and the Indians have ever been accustomed to make cordage, and a kind of cloth, from its fibres. The celebrated circumnavigator, Dampier, notices the process more than a century ago, as follows:—

"They take the body of the tree, clear it of it's outward bark and leaves, cut it into quarters, put it into the sun, when the moisture exhales; they then take hold of the threads at the ends, and draw them out: they are as big as brown thread; and of this they make cloth in Mindanas, called *saggen*."

In Jamaica, there have been upwards of £200 given by an order of the Assembly for the best specimens of this hemp. Dr. Stewart West gained a premium, and his process may be seen in the Hortus Jamaicensis.

From experiments tried on the hemp made from the plantain-tree fibre, which was manufactured into rope at his Majesty's dock-yard, Port Royal, in Jamaica, the following results were obtained:—

	Cwt.	*qr.*	*lb.*
King's nine-thread inch-rope broke by the weight of	6	1	14
Dr. West's specimen broke by the weight of	6	2	0
Specimen from the parish of St. Andrew	6	1	0
Do. Do. Portland . .	4	2	0
Do. Do. St. George .	3	2	0

The above specimens were all made of the same size as the king's rope.

PLUM.—PRUNUS.

In Botany, of the Icosandria Monogynia Class.

Plums are so numerous in their varieties, that to describe them separately would be endless, as not only every country, but almost every district, has its peculiar sorts of this fruit.

The Grecians added to their native plums those of Syria, Egypt, and Persia, and the Romans not only possessed themselves of the plums of all the known world, but employed their ingenuity in making additional varieties. Columella, in his tenth book, speaking of this fruit, says—

———then are the wicker baskets cramm'd
With Damask and Armenian, and wax plums.

Pliny states, in his fifteenth book, chap. 13, that there was a great variety of this fruit in Italy; and it is not long, says he, since the country about Grenada and Andalusia began to graft plums upon apple stocks, which were called apple plums; others upon almond stocks, which he calls a clever devise, as it produced both fruits, the stone being like the kernel of the almond. Those grafted upon nut-stalks, he states, retained the form of the mother graft; but they got the taste of the stock wherein they were set.

The wild sloe and bullace are indigenous to this country, and in all probability the only kinds that are natives; but, like the wild crab-apple, they have furnished stocks for every variety of their own species; and this fruit appears to have been attended to in early days, if we may judge from the variety that Gerard had in his garden at Holborn, in 1597. "I have," says he, "three score sorts in my garden, and all strange and rare: there be in other places many more common, and yet yeerely commeth to our handes others not before knowne. The greatest varietie of these rare plums, are to be found in the grounds of Master Vincent Pointer of Twicknam."

The Damson, or Damascene plum takes its name from Damascus, where it grows in great quantities, and from whence it was brought into Italy about 114 years B. C. Pliny says, this plum required the warmer sun of Syria; we may therefore conclude, it is still more inferior in our climate.

The Orleans plum takes it's name from the part of France so called. This is a handsome but an indifferent fruit, and not equal to the common Muscle Plum in flavour, although it is more cultivated than even the Green Gage, which is not only the most agreeable, but also the most wholesome of all the plums. This latter plum was called the Reine Claude, from having been introduced into France by Queen Claude, wife to Francis the 1st of that country, but it bears various names in different parts of France. It is often called *damas verd*; at Tours it is named *abricot verd*; at Rouen, where it grows abundantly, they call it *la verte bonne*. This plum received the name of Green Gage from the following accident:—The Gage family, in the last century, procured from the monastry of the Chartreuse at Paris, a collection of fruit-trees. When these trees arrived at the mansion of Hengrave Hall, the tickets were safely affixed to all of them, excepting only to the Reine Claude, which was either omitted to have been put on, or was rubbed off in the package. The gardener, therefore, being ignorant of the name, called it, when it first bore fruit, the Green Gage. The compliment was justly due to the family for the introduction of this excellent plum, which is more acceptable to the country at large, that the trifling respect can be to the family of Gage. Lord Cromwell brought several sorts of plums from Italy into this country, in the reign of Henry VII.: among them was the Perdrigon.

The Bonum Magnum is our largest plum, and greatly esteemed for preserves and culinary purposes. A plum of the same size and shape, but of a yellower hue, has lately been introduced by a Mr. Coe, of Brompton, and is called Coe's Golden Drop. In flavour it partakes both of the Green Gage and the Apricot. I have several standard trees in my garden at Bayswater, which are very productive; and the fruit has the quality of keeping perfectly sound and good until near Christmas, if it be gathered with the stalk or a part of the branch, and suspended in a dry room.

Plums are now forced in the highest perfection, which enables the gardener to supply the spring desserts with the autumnal fruits.

Dried plums are principally imported from Portugal, and the neighbourhood of Marseilles in France; from whence also prunes are brought: this latter variety is mostly used in medicine.

Plums of all kinds are considered more agreeable than wholesome, but like the pear, they lose their bad qualities by baking. Plums in general are moistening, laxative, and emollient, except the bullaces and sloes, which are astringent.—They are cooling, quench thirst, and create an appetite, and therefore agree best with hot constitutions; but they do not set easy with those that have weak stomachs. In years that plums are very plentiful, and consequently much eaten, fluxes generally abound; hence it appears that they ought always to be eaten very moderately, and then they should be quite ripe and sound.—*(Brookes.)* The damson plum produces a tolerably pleasant wine, and an exceedingly agreeable kind of jelly called damson cheese. The wild plum was used in medicine by the ancients, and the bark of the tree is thought to be equal to the Peruvian bark in cases of intermitting fevers.

POMEGRANATE.—PUNICA.

In Botany a Genus of the Icosandria Monogynia Class. Natural Order, Pomaceæ.

It takes it's name from pomum granatum, a kernelled apple.

The early part of the Bible notices the pomegranate as a native of Syria. It is mentioned as one of the fruits discovered in the Land of Promise; previous to which discovery, while the Israelites sojourned in the wilderness, it was selected as the ornament to the robe of the Ephod.

"And beneath, upon the skirts of it, thou shalt make pomegranates of blue, and of purple, and of scarlet, round about the hem thereof; and bells of gold between them round about. A golden bell and a pomegranate, a golden bell and a pomegranate, upon the hem of the robe round about."

The sacred history also informs us, that the two large pillars of brass, made by Hiram for the porch of Solomon's temple, were ornamented with carvings of the pomegranate; and by the writings of Solomon we may conclude, that a choice wine was made from it in Judea:—

"I would cause thee to drink of spiced wine of the juice of my pomegranates."

Again it is mentioned by the Prophet Joel:—

"The vine is dried up, and the fig-tree languisheth; the pomegranate-tree, the palm-tree also, and the apple-tree; even all the trees of the field are withered."

The Grecians esteemed this fruit, and mentioned it in their fabulous stories as growing in the Elysian Fields. When Ceres earnestly entreated Jupiter for the restitution of her daughter Proserpine, who had been carried off by Pluto, he promised to grant it on condition that she had tasted no food in the infernal regions. Unfortunately she had gathered a pomegranate from a tree, and eaten a few of the seeds, as she was walking in the Elysian Fields. This was made known by Ascalaphus, who alone had seen it; and the enraged mother turned him into an owl for his unseasonable information.

The pomegranate-tree was first brought to Rome from Carthage, in the days of the murderous Sylla; and about thirty-three years after this celebrated city was totally destroyed by Scipio, the second Africanus. Pliny says, in the 21st chapter of his 13th book, that "the territory of Carthage claims to itself the Punic apple, which some call pomegranate; from the flowers of which we get the colour to dye cloth, called puniceus (pink or light red.") He speaks of nine varieties, book 23, chap. 6; and, in the former book, he describes the sweet sort, the sour, the temperate, the styptic or austere, and one kind tasting of wine. "The difference," he says, "between the pomegranates of Samos and that of Egypt, consists in their flowers; the one being white and the other red. The rind of the sour kind," he says, "is the best for tanners and curriers to dress their leather with." This author recommends pomegranates to be divided into quarters, and steeped in rain water for three days; which he states makes a good drink for those who are troubled with weak habits. The flowers, rind, and every part of the fruit, were used medicinally by the Romans; on which subject he has written at large, book 6, chap. 23.

Some authors affirmed, that Grenada, in Spain, owes it's name to this fruit, which was brought from Africa, and planted in that part. The capital of this province has a split pomegranate for it's arms, which is seen on the gate-posts of the public walks, and is represented in carving, or by painting, on all the public buildings.

The pomegranate-tree was first cultivated in England in the year 1548, during the reign of Henry the Eighth; and I find it mentioned among the trees that fruited in the orange-house of the unfortunate Charles the First.

The pomegranate-tree blossoms well in the warmer counties of England; but the fruit comes to no perfection in the open air. The kind generally planted for ornament is the double scarlet, which is very beautiful when in blossom.

Gerard writes on the medicinal qualities of this tree, and informs us that he reared several plant from the seeds previous to 1597.

The pomegranate has been planted in the West India islands, where the fruit grows larger and finer flavoured than in Europe. The French, in the island of St. Vincent, had a riddle on the pomegranate, on account of the resemblance which the calix bears to a crown.

"Quelle est la reine, qui porte tout son royaume dans son sein?"

Lord Bacon notices this fruit, and recommends the use of the wine of the sweet pomegranates for complaints of the liver, or if that cannot be had, the juice of them newly expressed. He says, "let it be taken in the morning, with a little sugar; and into the glass into which the expression is made, put a small piece of green citron peel, and three or four whole cloves: let this be taken from February till the end of March." The juice of the pomegranate is preferred even to that of oranges in cases of fever. The rind of the fruit and the flowers are the parts directed for medicinal uses; they are both powerful astringents, and have long been successfully employed as such, both internally and externally for gargles, and in diarrhœas, &c. The dose in substance is from half a drachm to a drachm, in infusion or decoction, to half an ounce. *(Woodville.)*

As an instringent, the rind of the fruit, boiled in water with cinnamon, port-wine and guada jelly to be added, is recommended in Dancer's Medical Assistant.

The rind also produces as good ink as that made from galls.

Sloane says, that the leaves beaten with oil of roses, applied to the head, cures it's aching. The rind of the fruit, together with the bark of the tree, is still used in some parts of Germany, in the preparation and dyeing of red leather in imitation of Morocco.

From the Memoirs of the Philadelphia Agricultural Society.

The following very appropriate and interesting Lecture, was delivered by Dr. Rush, at the request of the President of the Philadelphia Agricultural Society, in compliance with motives impressed by the recommendations of that Society in their premiums. He has permitted it to be printed among their Memoirs, at the request of the members of that Society, who attended its delivery.

An Introductory Lecture to a Course of Lectures, upon the Institutes and Practice of Medicine, delivered in the University of Pennsylvania, on the 2d of November, 1807; *upon the duty and advantages of studying the Diseases of Domestic Animals, and the Remedies proper to remove them, By* BENJAMIN RUSH, M. D.

GENTLEMEN,

The science of medicine is related to every thing. A mere physician, that is a physician who knows nothing but the sciences which are supposed to belong exclusively to his profession, is a non-entity. To deserve that title in its extensive import, it is necessary for us to know something of the principles and practice of every art and pursuit of man. There is scarcely one of them that does not furnish some useful facts, or striking analogies, which may be applied to practical purposes, or to the support of some important principle in medicine. Even the science of morals is capable of affording aid to the healing art by its influence upon the understanding through the medium of the passions. It produces this effect in proportion to the extent of the objects to which we direct our benevolence. The physician who loves the whole human race will always be actuated with more zeal to extend the usefulness of his profession, than the physician whose affections are confined to the limited circle of his habitual patients. His zeal will be more active and more impressive upon his understanding, should he descend in the overflowings of his benevolence from the human species, and embrace in his studies and labours the means of lessening the miseries of domestic animals. This part of the brute creation have large demands upon us. The design of this lecture is simply to point out the duty and advantages of studying their diseases, and the remedies that are proper to remove them.—The subject is an interesting one to private gentlemen as well as to physicians, and I entertain too high an opinion of the good sense and correct views of medical science of my present audience to believe, that a few remarks upon it will be deemed an improper introduction to a course of lectures upon the institutes and practice of medicine.

We are bound in the first place to discharge the important duty to domestic animals which I have mentioned, by the relation that has been established between them and us by the author of nature. They were created at the same time, and from a portion of the same dust of which our great ancestor was formed.

They are the only part of the brute creation over which man has retained his dominion since his banishment from Paradise. We are to them (says Dr. Hartley) the vicegerents of God; and empowered to receive homage from them; and we are obliged by the same tenure to be their guardians and benefactors.* Their subjection to death, and all the diseases and pains which they feel in common with us, are the effects of the same rebellion against the Governor of the universe which subjected Adam and all his posterity to the same evils.

The diseases of the animals which still roam the forests, and refuse to be subject to man, are few in number, and generally of so mild a nature as to yield to the operations of nature. But this is far from being the case with domestic animals.—Like the human race, they acquire new and violent diseases by civilization, or by the manner of life to which their connexion with us, and their subserviency to our interests and pleasures expose them. Even parturition, so perfectly the work of nature in beasts of prey, is often attended with the same difficulty and danger in domestic animals that take place in women. Of this Dr. Bland has mentioned some remarkable instances in his observations upon human and comparative parturition. Similar instances have been communicated to me by Dr. Dewees, as having occurred under his notice while he practised midwifery in the neighbourhood of Philadelphia.

2d. We are bound to study the diseases of domestic animals, and the remedies that are proper to cure them, by a principle of gratitude.—They live only for our benefits. They cost us nothing in wages or clothing. They require in exchange for their labour, and all the other advantages we derive from them, nothing from us but food and shelter, and these of the cheapest and coarsest kind, so that there is constantly due to them, an immense balance of debt from us. This motive to take care of their health and lives will appear more striking when we consider the specific benefits we receive from each of them. The horse is not only an important appendage, but a necessary part of the cement of civilized society. He ploughs our fields,—he drags home our harvests and fruits to our barns and cellars. He conveys them from distant countries, over rough and difficult roads, to our market towns and sea ports.—He receives in exchange from them the products of foreign nations, and conveys them to the interior and remote parts of our country. He keeps up the inland connexion between different states by means of stages and posts, and thus favours the quick communication of intelligence, and the increase of national intercourse, commerce and happiness. He administers to our health and to our pleasures under the saddle, and in harness. He keeps up society and friendship in neighbourhoods too scattered in its population to admit of visits upon foot. In vain would country churches and courts be opened without the strength of this noble animal ; nor could the great system of representative government be supported in an agricultural country unless he conveyed the elector to the place of suffrage. In maintaining the freedom and independence of nations, the horse bears a distinguished part. When caparisoned with the furniture of war, he feels with his rider, the courage and pride of arms. In the race, he delights us with his swiftness, in which he exceeds all other four footed animals. Nor let us forget his sagacity in discovering roads, and choosing the safest parts of them, when inattention or darkness, has rendered his rider, or driver, unable to discover them. In the physician's midnight excursions to visit the sick, how often has his horse conducted him in safety, (and sometimes overcome by sleep) through interceptible paths, and across deep and rapid currents of water to the door of his patient, and again, back to his own home.—Still further, how often has the convivialist who has sat too long over his evening bowl, owed his life or his limbs to the good temper of this faithful animal, who in spite of a contrary direction of his bridle, has carried him with unbroken bones to the arms of his servants, to be conveyed by them to his bed, in order to dose away the remains of his intoxication.

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* *Observations on the frame, duties and expectations of man, vol.* 1. *p.* 415.

To the horned cattle we are indebted for many of the blessings and comforts of life. The strength and patience of the ox in the plough and team, have added to the wealth of the farmer in every age and country. The cow has still greater demands upon our gratitude. Her milk, in its simple state, furnishes subsistence to a great part of mankind. Its products in cream, butter and cheese, form the most agreeable parts of the aliment, and even of the luxuries of our table. A pustule upon her udder supplies a matter which, when introduced into the body, defends it for ever from the small-pox, and without substituting in its room, a painful or loathsome vicarious disease. Millions in every part of the globe unite with us in expressions of gratitude to heaven for this important contribution to the happiness of the human race. But our obligations to this benefactor of mankind, and to her whole species do not cease with their lives. Their flesh affords us the most agreeable aliment after death. Their tallow and the oil which is interposed between their joints, supply the absence of the sun in candles and lamps, whereby labour and study are profitably extended during a part of the night. Their hair affords a necessary ingredient in the plaster of our houses. Their skins protect our feet and legs in the form of shoes and boots from the injuries of the weather. They furnish likewise coverings for our books and pleasure carriages, and saddles for our horses. Their horns supply us with combs, and even their bones are converted when fresh, in to aliment, and when dry, into a salt of extensive use in medicine and in a variety of the arts.

Sheep occupy the next rank in the list of domestic animals in their claims upon our science. They afford us by their wool a covering from the inclemency of winter during every year of their lives, and by their deaths they supply us with a delicious aliment in the form of lamb and mutton.

The hog is said, like the miser, to do good only when he dies. But this is so far from being true that he is dishonoured by the comparison.—He fattens upon the offals of our kitchens, and performs the office of a scavenger, in cleaning the streets of our cities from putrefying masses of animal and vegetable matters. At his death, he bequeaths us his flesh for food, his hair for brushes, and his fat for medical and culinary purposes.

The immense and profitable disproportion between the labour of the ass and the mule, and the expense of their food, render their health of great importance in those countries where wheel carriages cannot be employed to convey the products of the earth to a public market.

The goat by its contributions of the delicate flesh of its young, and of its medicinal milk to our use, is entitled to a share of medical attention.

The courage and fidelity of the dog in defending our persons and property from the midnight assassin and robber, and the usefulness of the cat in destroying or chasing from our houses the mischievous animals that infest our cellars and closets, entitle each of them to an inquiry into the causes and cures of their diseases.

It remains only to mention the claims of poultry of all kinds, to a physician's care. They adorn our yards and fruit trees with their plumage. They inform us by their crowing, and other noises, of the approach of day. A part of them furnish us with eggs for aliment, with quills for writing, and with feathers for our beds ; and all of them in a gaeater or less number at a time, generally constitute after death a portion of our banquets, where a display is intended of hospitality or elegance.

In addition to what has been said in favour of domestic animals in their individual capacities, I shall only remark that collectively, they lessen the solitude and silence of a country life. They please us with their gambols when young, and delight us, by their looks and gestures in mature life, every time they receive food or shelter from our hands. They furnish the means of encreasing and perpetuating the fertility of our lands, and finally they gratify us with a sense of our sovereignty over their labour and their lives ; and thus furnish us with a small portion of that pleasure which the father of the human race enjoyed, when he received from his Creator the commission of his extensive dominion over all the creatures that live and move upon our globe.

A third reason why we are bound to study the causes and cure of the diseases of domestic animals, is because nature is wholly passive in such of them as are violent, or does harm in their efforts to remove them. This is evident in a more especial manner in the epidemics which sometimes prevail among them. The horses, cattle and sheep, of large neighbourhoods, and extensive districts are often swept away by those general diseases where no aid is afforded from medicine.

4th. By studying the diseases of our domestic animals we may rescue them from the hands of quacks, who add to the mischievous and unsuccessful efforts of nature, the evils of absurd, painful, and destructive remedies. Under this head I shall introduce a passage from the words of Mr. Vial, which exhibits those evils in the most expressive and affecting language. Speaking of the veterinary science, he says, " At this moment all appears obscured or bewildered by the ill placed confidence of the owners of cattle upon the blacksmith of the parish, upon illiterate and conceited grooms, stupid and listless shepherds, or upon a set of men infinitely more dangerous than all the rest. Who arrogating to themselves the style of doctors, ride about from town to town, distributing their nostrums, compounded of the refuse and vapid scraps of druggists' shops, to the destruction of thousands, whose varied disorders they treat alike, neither consulting nature, or art, for the cause or effect.

" Miserable animal ! bereft of speech, thou can'st not complain, when to the disease, with which thou art afflicted, excruciating torments are superadded by the ignorant efforts of such men, who at first sight, and without any investigation to lead them to the source of thy disorder, pronounce a hackneyed common place opinion on thy case, and then proceed, with all expedition to open thy veins, lacerate thy flesh, cauterize thy sinews, and drench thy stomach with drugs adverse in general to the cure they engage to perform."*

5th. It is our duty and interest to attend in a more especial manner to the health of those domestic animals which constitute a part of our aliment, in order to prevent our contracting diseases by eating them. Certain vegetables upon which they feed by accident, or from necessity, impart to the milk and flesh of some of them an unwholesome quality. Great labour sometimes has the same effect. A farmer in New-Hampshire, who had overworked a fat ox a few years ago in the time of harvest, killed him and sent his flesh to market. Of four and twenty persons who ate of it, fourteen died, and chiefly of diseases of the stomach and bowels. Putrid exhalations produce obstructions and ulcers in the livers of cattle, sheep and hogs, which render them unfit for aliment. They are moreover always unhealthy during the season in which they propagate their species ; hence the wisdom of that church which substitutes fish for flesh during a part of the spring months. Even the heats in summer, in middle climates, lessen the wholesome quality of flesh,—hence the propriety of living chiefly upon vegetables with a small portion of salted meat during the summer and autumnal seasons.

6th. We are further called upon to study the causes, seats, and remedies of the diseases of domestic animals, by the duties which we owe to our country and to humanity. The products of agriculture and commerce are often lessened by a fatal epidemic, brought on by diseases which blast the character of animal provisions ; and many poor families have been left to suffer all the evils of penury and famine, by the death of a single horse, upon whose labour, of a cow, upon whose milk, or a hog upon whose flesh, they had relied exclusively for subsistence, all of whom perhaps perished by diseases that might have been cured.

7th. By extending our knowledge of the causes and cure of the diseases of domestic animals, we may add greatly to the certainty and usefulness of the profession of medicine as far as it relates to the human species. The organization of their bodies, the principle of animal life, and the manner in which the remote and proximate causes of diseases produce their morbid effects, are the same as in the human body, and most of medicines produce in them, and us, nearly a similar operation. Their acute diseases are the same as ours. They are subject to epidemics from an impure atmosphere as well as from contagions. Fevers, catarrhs—hæmorrhages—dysentery—dropsy—scrophula—vertigo—madness—worms,—stone, hydrophobia and apoplexy, affect horses, horned cattle, sheep, hogs and dogs. The rheumatism, angina and tetanus affect horses. Cows are subject to diabetes. Cancers have been observed in dogs. Cats suffer and die from a disease which appear to be a form of bilious fever. Cutaneous eruptions and sores are common to them all. In short, when we except the diseases which are the effects of certain trades and professions, of intemperance, of the operations of the mind, and of a peculiar function in the female body, there is scarcely a form of diseases mentioned in our systems of nosology, but what is to be met with in domestic animals.

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* *General Observations on the Veterinary Medicine, p.* 16, 17.

To encourage us to extend to them the benefits of medicine, let us attend to the light and knowledge which several branches of our science have already derived from them. During those ages in which it was deemed criminal to dissect a human body, the bodies of domestic animals afforded the only sources of instruction in anatomy and physiology, and even since those ages of ignorance and prejudice have passed away, many important discoveries have been derived from the same sources by accident or design.

The discovery of the salivary glands in an ox, by Dr. Wharton; of the fallopian tubes in an ewe, by Rufus; of the thoracic duct in a horse, by Eustachius; of the lacteals in a kid, by Erasistratus, and of the pancrease in a turkey, by Dr. Maurice Hoffman, led to the discovery of the same parts in the human body; and it is well known that the circulation of the blood, and the peristaltic motion of the bowels in man, were first suggested by experiments and observations upon those functions in some of the above named animals.

Many useful hints have been taken from the instincts of domestic animals. They generally retire to places of silence and darkness, and discover an unwillingness to move, and to eat, when indisposed, and thereby teach us the advantages of retirement, rest and abstinence in the beginning of acute diseases.

The approach of epidemics is often known by the sickness of certain domestic animals, or by their deserting our habitations.

Many useful remedies for the cure of the diseases of the human body, have been discovered by observing their salutary effects upon domestic animals. The hellebore was introduced into practice as a purge, in consequence of its purging qualities having been observed in the goat. The use of the seton in certain diseases of the human body, was first suggested by its efficacy in the diseases of cattle. The benefits of frictions in glandular diseases are pointed out by the improvement in the quality of the milk, and the increase of its quantity, which are obtained by currying the cow.

The benefits of fasting in fevers are strongly urged by the slow putrefaction of the flesh of domestic animals, which are deprived of food several days before they are killed.

The benefits of wakefulness, and a standing posture in curing madness, are suggested by the practice of some of the farmers in England, who tame the most intractable and vicious horses, by confining them in a pound, and keeping them awake and upon their feet, by pricking them with a sharp nail, for three or four days, whenever they show a disposition to sleep or to lie down.

The cure of madness in a dog, by means of a profuse hæmorrhage which followed the cutting off his tail, suggests the propriety of copious blood-letting in the hydrophobia. Perhaps a remedy uniformly certain in that awful disease, may be reserved to reward the successful application of industry and humanity, to its cure, in the affectionate centinels of our houses and our lives.

The safety of blood-letting in old people, is deducible from the appearances of inflammation which are discovered in the bodies of old animals that die of acute diseases. The famous race horse Eclipse, so long known and celebrated at New-Market in England, died in the 26th year of his age of a colic, after two days sickness. Upon dissecting his body, not only the whole alimentary canal, omentum and mesentery, exhibited marks of violent inflammation, but the stomach, liver, spleen, lungs, blood vessels and glands, all discovered the same and other effects of the highest degree of morbid excitement.[*] Many other instances of the light which the anatomy, physiology, and remedies for the diseases of domestic animals have shed upon medicine, shall be mentioned from this chair in our lectures upon the institutes and practice of physic.

8th. We are bound to study the means of preserving the health of domestic animals, by all those precepts in the Old and New Testament, which recommends kindness to them, and protection from outrage and oppression. A portion of the humane spirit of those precepts, has pervaded all countries, and descended in a particular manner to the nations of the east. One of the tales of a philosopher of India, has recorded this fact in a striking manner. A traveller who was permitted to visit the place of torment for wicked men, saw there every part of the body of a man of high rank in flames, except one of his feet.—Upon asking the reason why that part of his body alone was exempted from the rage of the fire, he was told, that the only kind action that man had performed during his whole life, was to liberate a lamb which had been entangled by one of its feet, by means of a briar in crossing a field, and that as a reward for that act, his foot was exempted from punishment.

I proceed in the ninth and last place, to mention a reason for making the health of domestic animals the subject of our studies and care, which I should hesitate in delivering, had it not been sanctioned by the name of a man whose discoveries in physiological, metaphysical, and theological science, mark an æra in the achievements of the human mind: I mean the great and good,—I had almost said the inspired Dr. Hartly;——And that is, their probable relation to us in a resurrection after death, and an existence in a future state. I shall read a short passage from the Doctor's works upon this subject. After expressing a doubt concerning the redemption of the brute creation, he adds, "However, their fall with Adam, the covenant made with them after the deluge, their serving for sacrifices for the sins of men, and as types and emblems in the prophecies, and their being commanded to praise God, seem to intimate that there is mercy in store for them, more than we may expect, to be revealed in due time."[†]

In favor of these remarks of Dr. Hartly, it may be said, that as moral evil and death accompanied each other in the human race, they are probably connected in the brute creation.—That they possess nearly all of our vices and virtues; that the perfection of the divine government required that their vices should be punished and their virtues rewarded; that reparation should be made to them for their accumulated sufferings in this world; and that the divine bounty discovered in the gift of their pleasures would be rendered abortive, unless they were placed in a situation to make returns for them, in praise and gratitude in a future state of existence.

It is alike foreign to my inclinations, and to the design of this lecture, to enter further into this question. To such of you as wish to see all the arguments that are urged in its favour, from reason and revelation, I beg leave to recommend the perusal of an essay in the works of Dr. Hildrop, a learned and pious clergyman of the church of England, entitled "Free thoughts upon the brute creation." In whatever way the controversy may be decided, I shall only add, that a belief in the opinion suggested by the physician, and defended by the divine, whose names have been mentioned, is calculated in no one instance to do any harm, but on the contrary, much good, by increasing our obligations to treat our domestic subjects with tenderness and care. If the opinion be erroneous, let the justice and mercy of the Supreme Being, in his conduct to his brute creation, remain unimpeached. The divine government in this world, may be compared to the dreary prospect of an extensive and highly cultivated country, on a winter's day. The last revolution of our globe, will clothe this prospect with all the beauties of the vernal and all the products of the autumnal months. It will then appear that the apparent discord in the being and end of all intelligent and animated creatures, was

——"Harmony not understood;"

And that all their sufferings were a necessary part of "universal good."

But if the claims of domestic animals be so numerous and the advantages of attending to their health be so great, and above all, if their high destiny hereafter be in the least degree probable, it may be asked, why do we doom them with so much cruelty to premature death, and afterwards feed upon their flesh? I answer, that by destroying them we prevent their perishing by hunger, for in the present state of cultivation of our earth, there would not be subsistence for them and their offspring for more than a few years, by which means their species would soon be extinct. By thus multiplying their numbers, we multiply life, sensation, and enjoyment. We, moreover, prevent the pains of a gradual death from sickness and the miseries of a helpless old age. To destroy them by the knife, therefore, and to use them as a part of our food, is so far from being cruel, that it is an act of kindness and benevolence to them.

To the proposal for studying the diseases of domestic animals, it may be objected that their want of speech will forever prevent their imparting to us an account of the seats and symptoms of their diseases. This objection, I am aware, will be urged by those physicians who believe that every disease has a specific proximate cause, and requires an appropriate remedy; but students of medicine, who believe that all diseases have one proximate cause, will find no difficulty in discovering their existence and force in dumb animals.—The full or frequent pulse, the loss of appetite, the dejected head, and the languid and watery eye, are certain marks in all brute animals of one of the most frequent diseases with which they are affected, that is fever. The watery eye, an inability to bark, or barking with a stertorous hoarseness, indicates the approach of madness in the dog. The elevation of the hair on the back of a cat, and its not falling upon its feet when thrown from a moderate height, are the premonitory signs of that disease which has lately been so fatal to that species of animals in Europe and America. The tail of a horse losing its regularity of motion from side to side, indicates that he is indisposed, and the part in which his disease is seated is pointed out by one of his ears inclining backwards to the side affected. In acute pains, particularly from the colic, he bites his manger. The seat of diseases in the abdomen where the signs are absent, may be known by pressing the hand upon the whole belly of the animal. It will discover marks of pain, when the diseased part is pressed. Diseases of the head, lungs, kidneys, limbs and skin, are as easily known as the same diseases are in the same parts of the human body.

There are indeed circumstances, which favor our acquiring a more accurate knowledge of the diseases of dumb animals than of those of our own species. From the causes formerly mentioned, the number of their diseases is more limited, and their symptoms are more obvious, for they are not multiplied, nor complicated by intemperance in eating or drinking, nor are they under the influence of passions which suspend or alter them, and in some instances, to prevent their evolutions.

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[*] *Vial's elements on the Veterinary art, p.* 9, 10, 11.

[†] *History of Man, Vol. ii. p.* 486.

The seats of their diseases, moreover, are more perfectly known from the greater facility of dissecting and examining their bodies after death. Again there are circumstances which favour the operation of medicine upon them, of which we are deprived in our fellow creatures. These are, no prejudices against the names or taste of medicine,—a rare rejection of them after they have been received into the stomach, and the absence of all fear and solicitude, about the issue of their diseases.

I have then, gentlemen, laid before you, a brief detail of the obligations we owe to our domestic animals, and the reciprocal advantages to be derived from extending to them the benefits of the science of medicine. In performing this task, I have endeavoured to become the organ of speech for the dumb and a suppliant for creatures that are unable to plead for themselves.

Permit me to recommend the subject to your attention in your future studies. From the knowledge you will acquire of the anatomy of the human body in this university, of the laws which govern its economy, you will easily comprehend the small deviations from both, which take place in the bodies and functions of inferior animals. By acquiring this kind of knowledge, you will add to the resources of medicine as far as it relates to the human body, and by disseminating it gratuitously in your neighbourhood, you will become the benefactors of your country.

For a while, your knowledge in this branch of science, must be acquired by reading, observation and experiments; for as yet no societies or schools have been established for cultivating, or teaching it in the United States.

In all other countries, it has accompanied the advanced stages of civilization. In Greece and Rome, the necessity of offering such animals only in sacrifice, as were perfectly sound, added to the motives for taking care of their health. The Arabians cultivated veterinary medicine with nearly the same zeal that they did the medicine of the human body. In France and Germany the health of domestic animals, has for many years been a part of the studies of regular bred physicians. In St. Domingo, a society called the "Philadelphians," was established many years ago, consisting chiefly of physicians, whose principal business was to investigate and cure, what they called epizootic diseases, that is the diseases of domestic animals. They favoured the world with one valuable publication upon them, before the civil war in that island put an end both to their labours and their name.

A veterinary school has been lately established in London, under the patronage of some of the most respectable noblemen, private gentlemen, and physicians in the British nation. Already it has diffused a great deal of knowledge through Great Britain, particularly of the diseases of the horse. Of this knowledge, a considerable portion has fallen to the share of the farmers and farriers, much to the advantage of that noble animal!*

While I lament the want of a veterinary institution in our country, I am happy in an opportunity of mentioning that the diseases of domestic animals have not escaped the notice of the agricultural society of Philadelphia. They have recommended the study of them in strong terms, in their late address to the physicians and citizens of the United States; and it would be an act of injustice not to acknowledge, that it was in consequence of the excellent remarks contained in the part of the address to which I have alluded, being impressed upon me with peculiar force by the enlightened and patriotic president† of that society, that I was led to select the interesting subject of our lecture for the present occasion.

But in vain will be the efforts of public bodies, and private individuals to disseminate veterinary knowledge in our country without a provision for regular and oral instruction upon it.

From the public spirit of the trustees of our University, and particularly from their disposition to promote every branch of science connected with medicine, there is reason to believe, that it is only necessary to lay before them the advantages of a veterinary chair, in order to insure its establishment.

Should the subject of the diseases of domestic animals, be connected with instruction upon the principles of agriculture, and implements of husbandry, so as to constitute what is called in some European universities, "œconomics," or a system of rural economy, it would form a still more useful branch of education, not only for physicians, but for private gentlemen. I have lived to see the medical school of Philadelphia emerge from small beginnings, and gradually advance to its present flourishing condition, but I am not yet satisfied with its prosperity and fame, nor shall I be so, until I see the veterinary science taught in our University.

One of the patriots and heroes of the American revolution, who died suddenly a few years ago, in his barn yard, said with his last breath to his servant who stood by him, "take care of the creatures." Nearly in the same words which dictated this kind direction, I shall conclude this lecture. TAKE CARE OF THE HEALTH OF DOMESTIC ANIMALS.

Selections from late numbers of the London Farmer's Journal, *received at the office of the American Farmer.*

We should address our readers at this time, if appropriately, with a melancholy epistle :—last week was the usual Anniversary of the HOLKHAM Festivities! How striking and awful is the contrast in rural affairs, between that prosperity which accompanied the progress of this and such like institutions, and the gloom of poverty and distress which now pervades the country! We may truly say, unless it be the fixed determination of our Rulers to destroy and overturn the whole landed property of the empire, that there needs no other evidence of its decay and want of support, than the simultaneous surcease of all the Societies and Meetings which were at once the ornaments and schools of rural life.

As the measures of our Rulers turn all our hopes and exertions to disappointment and poverty, so it is natural that our remarks, instead of unavailing lamentations, should turn to gall and bitterness of heart. The Ministers know nothing of the country: they cannot tell how far it is from Yarmouth to Liverpool, nor what extent of territory lies between Falmouth and the Orkneys.—London is to them all the world, and the Stock Exchange contains every thing of worth and value that is in it. Imagination roots up reality, and the bubbles of the brain are held to be more solid than rocks, and more durable than pastures and fields. The unhappy possessors of these have nothing; own nothing—or their possessions are set at nought, and valued at nothing: their rights, nothing; their sufferings, nothing; their families, prospects, conditions in life, nothing at all; nothing to the *nation:* let them suffer, go, flee, starve!—there are fundholders enough to cover the whole surface of the kingdom. The famine that wastes Ireland; the sword which exterminates the Greeks; and the measures which destroy the agricultural property of this kingdom, appear to us to be part and parcel of the same politics; of the same unbending contempt of public opinion, and of the wise and repeated admonitions of progressive experience. If this be not so, why are the cultivators of the soil converted to paupers? Struggling between life and death, "steeped in poverty to the very lips," some have put unhappy ends to their own lives; many have died of broken hearts; many have run away from their creditors; many have sold up what they had, while they could yet escape with something; and many thousands have been sold up to the last stick they owned, and turned naked on the world. Whatever may be said of landlords, as to their share in producing these effects, *it is altogether the re-action of a most desperate money system*, against which it was the indispensable duty of Ministers to provide, so as equally to respect the *uti possidetis* in all interests; without which it is impossible for any thing that is done, to be permanently prosperous. By pursuing the contrary course, we have a taxation utterly incompatible with the circulation of money, and the value of things: not to repeat the ruin of landed property, we have luxuriant fields of corn which bring tears into the eyes of the cultivators:—the bounties of Heaven converted into plagues, and abundance in a source of alarm and horror. The blessings of God Almighty, we see, are not withheld, neither are the industry and toil of man wanting; but there is a curse upon the country, which prevents our enjoying the fruits of our labour.

Farewell to Holkham—its lovely fields—its beauteous flocks—its golden harvests—and its happy faces! Three days last week, thrice five hundred yeomen should have followed their great leader and patron,—the hospitable owner of that fine domain, where so many meetings have assembled, to view the luxuriant crops raised by superior tillage—the improved implements and their application—and finally, all the successful results of wise and liberal experiments, and of consummate skill and management. We may justly and truly lament the want that we feel, in the exhiliration of that delightful occasion, and in the *Report* to which we endeavoured to give something of a graphic expression, to convey the scene, with its merits to all British farmers, to foreign climes, and to future ages. We have nothing now to offer but vacancy. Dull and spiritless as the gloomy times, we have not once a-year the hope of a subject which might elevate the fancy, or divert the thoughts of men from the distress that surround them.——Farewell—a long farewell to Holkham! Royal and Noble Guests, farewell!—Here was an assemblage to meliorate humanity; condescension and affability graced the titled ranks; and the free mixture of opinion spread beneficially among all. Farewell to these delightful scenes, for the sun has set which lighted them up; the prosperity of agriculture is fallen, and its interests are trampled on and despised. May He whose high behests are thwarted for a time by the ignorance and folly of man, bless the wise and liberal patron of the scenes we have witnessed! Blessed is he in the good he has done to mankind; blessed is he in the love and gratitude of British cultivators; thrice blessed in the admiration of the liberal and enlightened of all nations,—and in that his name and character shall descend thro' future generations to all posterity, as one of the greatest benefactors of the human race.

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* *The Dublin society of arts have lately established a professorship of the veterinary art, and endowed it with a salary of fifty pounds a year, with a dwelling house for the professor, (Dr. Peel,) valued at sixty-six pounds sterling a year. Carr's Stranger in Ireland.* p. 29.

† *Richard Peters, Esq.*

HOLKHAM SHEEP-SHEARING.

The following poem, descriptive of the business and festivities of the Holkham Meeting, was written by the Editor, and very partially circulated in 1820. It is now given to our readers and the public, not as a splendid poem, but as a faithful record and description; and as a meed of honest though inadequate praise of a character and an institution alike unrivalled, and deserving of all possible celebrity from much higher efforts of the Muses.

Hail, sweet Britannia! fairest child of Jove!
Thy children's partial eulogies belong
To thee, the subject of thy grateful song;
Accept the tribute of their filial love;
Thy power, thy laws, and liberty inspire
With praise appropriate oft the sounding lyre,
Thee first in fame and happiness to prove,
In arms and arts renowned, and blessings from above.

But bolder pens may tell thy praise in arms,
Thy fame for freedom, and thy great renown;
To me the strains of glory are unknown,
And pure domestic bliss has greater charms.
Round the fair fields of Holkham let me stray,
Where art and nature mutual force display,
Advancing to perfection those fair farms,
Which not the sun alone, but brighter genius warms.

Enamoured of the subject of her song,
The rustic muse delights in silent mood
To wander there, and pour her praises rude,
Such as may soothe her native scenes among;—
For poesy oft inspires the humble swain:
Steals half his time, perhaps, and half his pain:
And though to him no classic gifts belong,
He earns a simple fame among the village throng.

And who, without enraptured eye, can see
Arcadian scenes, which fancy fabricates?
While here and there a shepherd ruminates
Beneath the sweet shade of a beechen tree;
And at his feet a dimpling streamlet runs;
His flocks still bask in ever-genial suns,
Nor fear the knife, but live secure and free:
Such are thy magic charms, O sensibility!

All bosoms dance with innocent delight;
The cheerful village swains and lasses trim
Wander in pairs along the winding stream,
Or deck the sloping hills with spots of white;
Or line the hawthorn hedge with snowy sheen,
Or skirt the copse, or gambol on the green:
With nosegays, love disposed, their bosoms dight,
Dearer to them than gold, or Indian diamonds bright.

Recal imagination from her dream,
To fix on Holkham and reality,
Where all her brightest forms combined we see
With truth so fair, it yet does fancy seem;
For here the sons of toil are happy; here
Sorrow and poverty do not appear!——
On noble minds may this example beam,
And spread to every hall the soul-inspiring theme.

Of ancient hospitality the praise
Our noble ancestry of Britain won;
But who continues what their sires begun?
Few nobles live in our degenerate days.
How smiled the numerous tribes each happy year,
What time Dan Abraham 'gan his flocks to shear!
Who now to heaven such gratitude displays?—
Great Coke—and nobly he the pious tribute pays.

Patron of rural arts! their prayers for thee
Daily ascend, whose hands thy fields employ,
And mix with all the blessings they enjoy:
(Sweet is the bread of virtuous industry).
Blessing and blessed is he whose talents claim,
At once the landlord's and the patriot's fame:
Whose bounty, boundless as the swelling sea,
Gives to the admiring world his annual jubilee.

Her morning song the sky-lark has begun,
While Phœbus uphill drives his reeking steeds:
Aurora first o'er daisy-spangled meads
Trips lightly, loosing wide her crimson zone,
Once in your lives, ye sluggards early rise,
Behold the glories of the morning skies—
While dew-drops glitter on the gorgeous sun,
And down each blade of grass the liquid diamonds run.

The shepherds now pursue with nimble strokes
Their fleecy task; and often, being dry,
The trusty horn goes round; the master's eye
Kindly rewards the exertion it provokes.
In neatness each the other strives to foil,
And through the day sustains the gladsome toil;
Surrounding nobles hear their rustic jokes,
And own them happier than many greater folks.

But see the cavalcade of grateful friends
Surround him, pressing through the numerous fields!
Each its appropriate instruction yields;
All he explains, he has no private ends.
From farm to farm they ride, from vale to hill,
And hail the effects of industry and skill:
His country's welfare nobly he extends;——
Who thus the improvement shews a liberal lease defends.

Such scenes themselves to every heart endear;
Meanwhile is spread the hospitable board,
With viands choice, and wines, supremely stored:
And shepherds quaff apart their cans of beer:
Convivial toasts impart their richest zest,
And mirth and welcome crown the ample feast.
Old time limps by and gives a longing leer,
And fain would stay awhile to taste the bounteous cheer.

The goodly hall groans with the gathered throng,
From the whole empire drawn and foreign states,
To see the wonders rumour celebrates,
And hear the truth recorded by his tongue:
But never Fame her brazen trumpet blew,
To pour a praise so pure, a note so true;
And never did benevolence among
Mankind establish facts more useful, or more strong.

Proceed, great master of the rural art!
Thy country's pride, and friend of human kind—
In fortune great—but greater still in mind.—
Happy—unmov'd by envy's poison'd dart;—
Thy worthy compeers round—a noble band—
Attest their love with voice and willing hand,
While "Coke, with *nine* times *nine*," re-echoes from each part,
And peals of plaudits burst from every honest heart.

But see too soon the evening shades advance;
And objects yet important claim regard,
Where cattle stand in the contiguous yard;—
True pleasure dies with reason's vigilance:—
Those lengthened orgies only vice admires
From which abash'd the blushing day retires.—
Let joy be rational—yourselves enhance—
Teach virtue by example;—mirth with temperance.

Hence, these unneeded monitory strains!
For reason here her chief instruction yields,
By crops compared on highly cultured fields;
In this our country's dearest interest reigns;
Next sheep and cattle, viewed with practised eye,
In weight and beauty with each other vie.
Honour to Coke—reward the victor gains—
And stock unrivalled graze on our luxuriant plains.

Long may these blessings grace Britannia's isle,
And long may her prosperity increase—
In wealth and industry, content and peace:—
(Would these again on agriculture smile!)
And long may HE whose merit claims the song,
Enjoy his well-earned fame these scenes amopg;
Whose bright example cheers the sons of toil,
And lights with emulous fire the yeomen of the soil.

Here forty-and-four* times have friends that love,
And strangers that admire him, met, and they
Have seen and learned, and gone improved away:
Reason persuades us—but examples move.
Ponder his rules—and may their fruits increase;
I pen no farewell to such scenes as this!
Basis of Britain's greatness they shall prove,
While freedom nerves her hand, the gift of heav'n above.

* * *

AMERICAN MANUFACTURES.

Extract of a letter from Cincinnati, Ohio, to the Editors of the Statesman.

"Having seen several communications in your valuable paper, respecting the *art of dying* and the cultivation of the *woad plant*, by which it seems that manufacturers in your part of the country are doubtful, whether woad can be produced in the United States, in the same perfection as in England, I have thought proper to state, for their information, that in 1821, I planted two acres, and found the produce to be at least one fourth more in quantity, having cut *seven crops* during the season. In England, I never knew more than *five*. Its strength, as a mordant, exceeded the English at least one third, containing three times the colouring matter I have ever found in any woad, after an experience of forty years, in an extensive trade in England.

I herewith forward to you some patterns of wool, dyed with this woad, and regret I had not preserved some coloured with woad only, by which artists acquainted with the subject, would know its superior qualities. I have always observed in England, that our woad plant produces more in quantity and better in quality, in a warm season; and I attribute its great perfection here to the same cause.

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* *Written in* 1820; *the last meeting in* 1821 *made the number forty-five.*

Your manufacturers of woollens cannot fully succeed until they become well acquainted with this useful plant, as no good blue, black, green, or purple colour can be produced without it All other modes are imperfect, expensive, and mischievous. Having made this country my home, I shall take pleasure in communicating this knowledge, to any one that may need it, for a moderate compensation. Written directions may be given for growing and preparing woad, without any chance of error; but to use it properly, requires considerable attention and good instructions.

I suppose it may be produced for three or four cents per pound—perhaps for something less I have sold some of mine at Baltimore this season for 12½ cents, by which you will perceive there is great profit in its cultivation. In my opinion no substitute for woad will be found worthy of attention, although it seems your friend *Hopson* thinks he has discovered one, which will answer the purposes both of woad and indigo. Your correspondent will confer a favour on me, by giving a description of the wild indigo plant, as he terms it. I will investigate its properties, and communicate the result to him.

Your correspondent who has written on the *scarlet dye* appears to be acquainted with only a part of the theory of that art, as two essential ingredients are not mentioned, one of which I have seen since my arrival in this country. Your friend is also in an error in supposing he can render colour more brilliant by using steam. I have made use of steam in dying for nearly thirty years, and am well acquainted with its advantages and disadvantages. It is a cheap and expeditious mode; but it cannot be used for fine colours, such as Saxon blue, green, pink, crimson, scarlet, orange, yellow, and all other delicate colours, *but at the expense of their beauty.*

All dyers should know, that when bright colours are wanted, the first step to be taken is to clear the water of all mineral and animal substances. This is all that is necessary to prepare the liquor for any bright colour; but if raw water be added, or steam suffered to flow into the vessel, the beauty of the colour will be destroyed, in proportion to the quantity admitted."

☞ The letter, from which the foregoing is an extract, adds a number of other particulars, connected with the subject of manufactures. It states, among other things, that large quantities of Fullers' Earth are said to be found on the banks of the Wabash; but after diligent search, none, in a pure state, has yet been discovered in the vicinity of Cincinnati. Our correspondent has put to us the following questions, to which we hope some one will furnish satisfactory answers, as we are unable to do it ourselves:

1. What quantity of woad would be consumed annually, in the vicinity of New York and Philadelphia, estimating one pound of woad to five pounds of wool, dyed of a dark blue?

2. Would the manufacturers give a reasonable compensation to be instructed in the art of dying generally?

3. Whether it would answer any good purpose, for a person who understands the manufacture of woad and its various applications in the art of dying, to establish himself in this part of the country?

It is proper to remark, that we are wholly unacquainted with the writer of this letter; nor have we a sufficient knowledge of some of the topics embraced in his communication, to judge of the accuracy of his remarks. *Hopson* will be able to speak for himself, where his correctness is questioned.

The beautiful specimens of colouring, accompanying the letter, may be seen at this office, where the name and address of the gentleman who forwarded them may be obtained.

PHILADELPHIA COUNTY MEETING.

At a meeting of farmers held in Germantown, at Whittal's Tavern, on the 19th of September, STEPHEN DUNCAN having been called to the chair, and J. B. SIMS appointed secretary.

It was unanimously declared that the interests of the farmers of this and the adjacent counties would be essentially promoted by the establishment of an efficient agricultural society, and accordingly it was

Resolved, That Manuel Eyre, Stephen Duncan, Aaron Clement, John Tomlinson, Albanus C. Logan, Joseph B. Sims, Reuben Haines, George Blight, and John Hare Powel, be constituted a committee, with full powers to carry into effect the intention of this meeting; to co-operate with such committees as shall have been appointed by Montgomery, Bucks, Chester or Delaware county, and to meet *on Saturday, the 19th of October, at the sign of the Buck.* near the 8th mile stone, on the Lancaster turnpike, in order to organize the association of practical farmers for the advancement of agriculture and rural economy.

STEPHEN DUNCAN, *Chairman.*

JOSEPH B. SIMS, *Secretary.*

THE FARMER.

BALTIMORE, FRIDAY, OCTOBER 25, 1822.

MEDICAL UNIVERSITY—DOCTOR RUSH—THE UNIVERSITY OF VIRGINIA.

The notice taken in our last paper, of the Maryland University, far from being unsuited, as some have intimated, to the columns of this Journal, falls directly under the heads—Internal Improvement and Domestic Œconomy. Though it has been said "a little learning is a dangerous thing," yet there can be no doubt that any young man attending with a willing heart to a single course of lectures, would forever derive satisfaction and benefit therefrom, in all the ordinary pursuits of rural life. The rudiments of Anatomy would teach him to know what particular structure of the animal frame, would be best adapted to the various purposes, to which domestic animals are applied. Did he want a horse for the harness or saddle—an ox for the shambles or the yoke—a hog to be reared in the stye, or to seek with activity a more precarious subsistence in the woods—he would make a judicious selection by a direct application of the principles of anatomy, and of mechanicks.—Did he wish to ascertain by what process any given substance on his farm might be most speedily converted into manure; in what stage of putrefaction such manure might be applied with most effect, according to the nature of the soil and the crops to be grown; it is by the lights of *chemistry*, he would make these investigations—in truth ,there is no species of knowledge which is not worthy of acquisition, for knowledge is power, and if we have not leisure to acquire the ornamental, let us embrace all opportunities to gain as much as possible of that which is *useful.* In this paper we have given from the late Doctor Rush—he who gave existence and character to Medical Institutions in this country—a lecture on the importance of studying the *Diseases of Domestic Animals.* Let his great example humiliate the vanity of those who think such studies unworthy of men who would be thought scientific. That illustrious and revered Philosopher and Philanthropist, more than thirty years since, recommended that agricultural exercises and competitions should be made a part of scholastic *amusements*; and we rejoice to learn that those who may be justly denominated the *wise* men of *Virginia*, (the noblest of titles) have it in contemplation to establish a Professorship of Agriculture at their University near Charlottesville; comprehending in their plan a *Pattern farm*, where every operation of Husbandry and Horticulture will be exhibited upon scientific principles, and causes and effects philosophically explained and illustrated—such a scheme is worthy of men who have honoured, while they enjoyed the highest honours of their country—should it recive from the agricultural community of that enlightened state, the countenance it deserves, we venture to predict with confidence, that the young men of Virginia will turn to the study of agriculture as to an honourable and an elegant science. That Physic and the Law will no longer be characterised as the only *learned professions*, and their votaries will cease, like swarms of locusts, to cumber the earth, as they were threatening to do.

It will be seen in this paper that Mr. Coke the rich and hospitable English Commoner, has discontinued his Annual Agricultural Festivals, where for so many years he had entertained many hundred of the most distinguished friends of Agriculture and Practical Farmers of England and of Europe—considering his boundless hospitality, this may be regarded as a strong evidence of the great depression of the farming interests in that country; and in truth, we learn that in a letter to one of his friends in America, he says, he has been compelled to reduce his rents thirty-three and a third per cent, and his Tenants are known to be better able, than any others in England, to support the existing burdens on that class of British population.

Gen. Van Ransellaer—the Coke of America, continues to bestow the most munificent encouragement on the agricultural associations in his neighbourhood, giving as many *hundred*, as some other wealthy citizens give *single* dollars, to such objects.

In the prices of country produce, little change has occurred since our last.

BELMONT,

Late the residence of A. C. Hanson, Esq. is offered at private sale. There is probably no farm in Maryland which combines so much beauty with so much intrinsic value. It is situated between nine or ten miles from Baltimore, near the Washington Turnpike, commanding a view of all the intervening country, &c. The land has been highly improved, and is now in order to produce excellent crops of wheat, corn, tobacco, &c., and being admirably adapted to grass, would make a beautiful grazing and dairy farm. The buildings are valuable, and consist of a large and well finished Dwelling-house, Overseer's house, Barn, Stables, Ice-house, Dairy, &c. &c., with an excellent garden well stocked with choice fruit, and a good apple orchard. The farm contains between seven or eight hundred acres, of which about 300 are in wood.

Terms of sale will be made known by application to the Subscriber in Baltimore, or Mrs. P. Hanson, on the premises.

J. I. DONALDSON.

HORTICULTURE.

POMARIUM BRITANNICUM,

An Historical and Botanical account of Fruits, known in Great Britain, by Henry Philips,—Second Edition.

(Continued from page 243.)

PUMPKIN, or POMPION.—PEPO.

In Botany, of the Monœcia Syngenesia Class. Natural Order, Cucurbitaceæ.

The pompion is a coarse, inferior kind of melon, which has long been known in Europe, as Pliny mentions it in his 19*th* book, chap. v. where he says, cucumbers of an exceeding large size are called pompions. Again, in his 20*th* book, chap, ii. he says, "as for the fruit, called pompions or melons, being eaten as meat to cool the body, and the fleshy substance applied to the eyes assuaging their pain, &c.

Aiton states it to be a native of the Levant, and says it was first introduced into this country in 1570. Gerard says, "as there is a wild sort of cucumbers, of melons, citruls, and gourds, so likewise there be certaine wild pompions, which grow in Barbarie, Africa, and most parts of the East and West Indies." This author says, "the purple of the pompion is neuer eaten raw, but boiled in milk and buttered; is not onely a good wholesome meate for man's bodie, but, being so prepared, is also a most phisicall medicine for such as have an hot stomacke, and the inward parts inflamed:" he continues, "the flesh or pulpe of the same sliced, and fried in a pan with butter, is also a good and wholesome meate:" but he condemns the method of using it with apples in pies.

This fruit has lately been raised in the neighbourhood of London to an extraordinary size, weighing nearly two hundred weight. These are sold in the shops of the metropolis, more as a curiosity than for use. I have found them, when boiled in their own moisture, *viz.* without water, an excellent vegetable with meat, having a taste resembling artichokes: with the addition of the peel and juice of lemons, they make an agreeable pudding.

Pompions are used by the Jews in the Feast of Tabernacles, when they form a kind of cradles into which they put a great number of pompions.

In Hughes's Natural History of Barbadoes, he says, "Pumpkins make a great part of the food of the poorer sort, in the summer-time, as well in Asia and Africa as in America." He adds, that they are distinguished in Barbadoes by the names of the White, the Blue, the Marbled, and the Garden Pumpkin. The latter differs from all the rest by having no seed, but is propagated by slips. He says, also, that they are boiled and eaten with flesh meat, and much used by the poorer sort in soups.

The jugglers, or quacks, in some parts of America, extract the pulp out of pompions, and fill them with flint stones, with which they make a great noise, and pretend to frighten away all the complaints of their superstitious patients.

QUINCE.—CYDONIA.

In Botany, a Genus of the Icosandria Pentagynia Class.

Linnæus has joined this genus, as well as the apple, to the pear, while Miller separates it on this account: he says, "the pear will take upon the quince by grafting or budding, and so *vice versâ*; but neither of these will take upon the apple, nor that upon either of these." But we have a particular account transmitted to us by Pliny, that quinces were grafted upon apple-stocks in his time, (book xv. chap. 14): he says, "as for the quince-apples that come of a quince grafted upon an apple-stock, they are called *Appiana*, after Appius, who was of the Claudian House, and who first devised and practised this mode of grafting; these apples," continues he, "have the smell of the quince, are of a red colour, and the size of the Claudian apple."

The Quince was called *Cydonia*, after an island in the Mediterranean, now named Candia. It is a fruit that the ancients held in high estimation: they considered it as the emblem of happiness, of love, and of fruitfulness: it was dedicated to Venus, and the temples of Cyprus and Paphos were decorated with it. The statues of the gods also who presided at the nuptial bed, were ornamented with this fruit; and the bride, before she entered into the marriage-bed, used to eat of the quinces. Columella says, quinces not only yield pleasure but health also: he speaks of three kinds; the Struthian, the Must Quince, and the Orange or Golden Quince.

The learned Goropius maintains that quinces were the golden apples of the Hesperides, and not oranges, as some commentators pretend. In support of his argument, he states, that it was a fruit much revered by the ancients, and he assures us that there has been discovered at Rome a statue of Hercules, that held in it's hand three quinces; this, he says, agrees with the fable which states, that Hercules stole the golden apples from the gardens of the Hesperides.

Pliny speaks of quinces in his 15*th* book, 11*th* chap. and says, "there are many kinds of this fruit in Italy, some growing wild in the hedgerows, others so large that they weigh the boughs down to the ground, some of a green hue, others inclining to gold colour: these were called *chrysomela*, which seems to give authority to the above account of Goropius. The only kind that was eaten raw, he states to have been raised by grafting the large quince upon the stock of a smalll kind, called *struthea* (the pear-quince.) He adds, "all kinds of this fruit are in use now-a-days, within the waiting or presence chambers of our great personages, where men give attendance to salute them as they come forth every morning." He also states, that they were used to garnish the images which stand about the bed's head and sides.

The same author, in his 23*d* book, chap. 6*th*, writes much on the medicinal qualities of this fruit. "Quinces," says he, "when eaten raw, if quite ripe, are good for those that spit blood, or are troubled with hemorrhage." The juice of raw quinces, he states to be a sovereign remedy for the swoln spleen, the dropsy, and difficulty of taking breath, particularly to those who cannot draw their breath but in an upright position. The flowers, either fresh or dried, he tells us, are good for the inflammation of the eyes. The root of the tree was used more as a charm than a medicine for those afflicted with the scrofula.

Quince-trees grow wild on the banks of the Danube, and they are stated to have been brought into this country from the island of Crete, now called Candia. They have long been cultivated in this kingdom, as our earliest authors on this subject mention them. Gerard says, they were often planted in hedges and fences to gardens and vineyards in his time. By the Hortus Kewensis it appears that the quince was first introduced in the reign of Henry the VIIIth, 1537, which is evidently an error, from the circumstance above related by Gerard, who was then an old man.

Quinces are used in medicine, being of an astringent and stomachic quality. The expressed juice of this fruit, in small quantities, as a spoonful or two, is of service in nausea, vomiting, &c. Lord Bacon says, "It is certain that the use of quinces is good to strengthen the stomach; but we take them to be better if they be used in that which they call *quiddeny* of quinces, than in the bodies of quinces themselves, because they lie heavy in the stomach; but those quiddenies are best taken after meals, alone; before meals, dipped in vinegar."

Quinces grow in such abundance in some parts of the Wealds of Sussex, as to enable private families to make quince-wine in quantities of from 1 to 200 gallons in a season. It is an agreeable wine, that improves much by keeping, and is greatly esteemed by asthmatic persons. A gentleman residing at Horsham, in Sussex, assured me, that he was not only relieved in an asthmatic complaint of long standing, but completely restored to his health by the use of this wine, which was made after the following receipt:—

"Cut large quinces in quarters, and core them, as the seeds give the wine an unpleasant flavour; grind them in the same manner as apples for cider, and put to every gallon of pummis a gallon of water; let it stand a day or two, then strain it off. Should the pummis smell very strong of the fruit, it will bear a little more water, and to every gallon put three pounds and a quarter of moist sugar; tun it and stop it quite close in the following March; rack it off; cleanse the cask from the sediment, and put it back again; and in the second year bottle it off." Quince-marmalade is greatly admired by those who are fond of the fruit.

The Portugal quince is the most esteemed. In the pruning of the quince-tree little is required, except to keep the stem free from suckers, and to cut all branches that rub each other.

RASPBERRY-BUSH.—RUBUS IDÆUS.

In Botany, a Genus of the Icosandria Polygynia Class.

The raspberry was but little noticed by the ancients, and that principally on account of it's medical virtues. Pliny does not consider it of so much importance as the bramble, in mentioning which he says, "there is a third sort of bramble, which the Greeks call *Idæa*, after Mount Ida. This fruit is smaller than the other bramble-berries, with less thorns on the stem, and these not so sharp or hooked. The flowers of this raspis," he continues, "being tempered with honey, are good to be laid to watery and blood-shotten eyes, as also the Erysipelas. Being taken inwardly, and drunk with water, it is comfortable medicine to a weak stomach."

The red-raspberry is indigenous to this country, and is often found wild in the northern counties. I have also seen it in the wild state growing freely in some woods on the South Downs of Sussex. It is a fruit that appears to have been much improved by cultivation, as Gerard writes on it, previous to 1597, as not being equal to the blackberry, although he says it is planted in gardens. He calls it Raspis, or Hindberry: "the fruit," he adds, "is in shape and proportion like that of the bramble: red, when it is ripe, and covered over with a little downiness, of taste not very pleasant." He does not mention the white raspberry, nor has Tusser, who wrote in the previous reign.

The large kinds of raspberries, both red and yellow, were brought from Antwerp to this country.

The yellow or white raspberry is most admired at dessert; indeed all the white fruits of the berry kind, are sweeter than the coloured, but other fruits that are coloured are generally sweeter than the white.

The red raspberry is considered the finest for flavouring ices, jams, &c. A third kind is cultivated, which produces two crops a year, but I have seldom met with the October raspberry possessing much flavour.

Raspberries are much cultivated in the neighbourhood of Isleworth and Brentford; from whence those are sent to London in swing carts, which are used by the distillers for making raspberry brandy, raspberry vinegar, &c. as also those used by confectioners and pastry-cooks; but the raspberries which are intended for the table, are brought by women on their heads: their load consists of a round, or basket, containing twelve gallons, of three pints to a gallon; and, although the distance is ten miles from Isleworth to Covent-Garden market, they regularly perform the journey in two hours; for which they are paid three shillings and sixpense. From Hammersmith these industrious women will take a load three times a day, for which they receive eighteenpence per load. These female fruit porters come to the vicinity of London for the season, from Wiltshire, Shropshire, and Wales: in their long journies they seldom walk at a less pace than five miles per hour.

The dietetic and medicinal virtues of raspberries being the same as those of the strawberry, will be noticed in the history of that fruit.

"Raspberry and strawberry wines," says Dr. Short, "are of all made-wines the most delicious to the taste; they lightly and pleasantly stimulate the nerves of the mouth and nose with a most agreeable smell and taste, which proceeds from a mixture of their essential salt and fine oil." This author recommends these wines in scorbutic disorders as a purifier and sweetener of the blood. "Mixed with water," he says, "they make a good reviving draught in ardent fevers."

The wood of the raspberry-bush produces fruit but one year, therefore that should be carefully cut down below the surface of the earth, and the young shoots should be shortened to about two feet in height: the middle or end of October is the proper time for this pruning. The fruit is produced from young branches out of the last year's shoots or suckers.

SERVICE-TREE.—SORBUS.

In Botany, a Genus of the Icosandria Trygynia Class.

This fruit, which is a native of England, is now as little known, and as rare in the London market, as the fruits of the most distant parts of the world; and the service-berry-tree is now so thinly scattered over the country, that many farmers do not even know its existence.

Pliny writes of it as a fruit held in estimation by the Romans. He mentions four sorts, some round, resembling apples, others shaped like pears, others like an egg, and one variety which was only used medicinally. He states, that Cato would have service-berries preserved, (book xv. c. 21,) and in the 17th chapter of the same book he gives directions for preserving them in two different ways: again he mentions them in his 23*d* book, 17*th* chap. and says their medicinal virtues are the same as those of the medlar.

Gerard describes two kinds, and says, "they are found in woods and groves in most places of England. There be many small trees thereof, in a little wood a mile beyond Islington: in Kent it groweth in great abundance, especially about Southfleete and Gravesend."

The service-tree is still occasionally to be met with in the hedge-rows in Kent, and in the Wealds of Sussex, of the size of a moderate oak-tree; as also in the north of England and Wales.

The service-berry, which is an umbilicated fruit, partakes of the quality of the medlar, both in the green and in the ripe state. It is gathered in bunches, and put into, or hung on, a cleft stick of about a yard long, which becomes a mass of berries: in this state the fruit is sold by the country people, and then hung up in a garden to receive the damp air of the night, which causes it to undergo a kind of putrefactive fermentation, and in this soft state it is eaten, and has a more agreeable acid than the medlar. Chancellor Bacon speaks of service-berries in his time as a garden fruit. In Italy and the south of France, they are still served up in the dessert.

I conclude, that the great size of the service-tree has been the cause of excluding this fruit from our gardens: but it is, from it's beauty, particularly when in blossom, a desirable tree for planting in parks or paddocks; and as the timber is so valuable, and now become so rare, I hope to see it more cultivated. There is a remarkable fine tree of this kind now growing at Kingsfold farm, in the parish of Rusper, near Horsham in Sussex.

I know many noblemen and gentlemen object to fruit-bearing trees being planted on their estates, on the principle that it encourages depredators to injure their plantations; but this seems but a poor excuse for depriving themselves and the public of the beauty and variety which the blossoms give at one season of the year, and the fruit at another, particularly to those who have park-keepers or bailiffs on the premises.

Furber of Kensington, who in 1733 published his twelve engravings of fruits for the desserts of each month, gives a representation of the Italian services for October, and the English maple-leaved service-berries for the month of November.

This fruit is reckoned to be very restringent, and useful for all kinds of fluxes; but when ripe it is not altogether so binding.

The timber of the service-tree is of a fine hard grain, and the variations pleasing when wrought into cabinet goods: it is esteemed by the turner and carver, as well as for the making of gun-stocks. It is used by mill-wrights for cogs to wheels, &c. in preference to any other wood; it is also a very durable wood for buildings that are exposed to a northern aspect.

FROM THE BOSTON WEEKLY MESSENGER.

BRIGHTON CATTLE SHOW.

The annual exhibition at Brighton last week, was attended as usual by a large concourse of people. The variety of manufactured articles was not so great, perhaps, as on some previous years. There were some very fine cloths; and some beautiful specimens of household manufactures, particularly one or two remarkably fine grass bonnets in imitation of the Leghorn.

At one o'clock, on Wednesday, the Society went in procession to the Meeting house, where, after a prayer by the Rev. Dr. Foster, the annual address was delivered by the Hon. Timothy Pickering.

The exhibition of the strength of Working Cattle, Ploughing Match, Sale of Manufactures, &c. took place on Thursday, in the manner previously arranged.

At 4 o'clock the premiums were declared in the Meeting House. The official reports, as far as received, will be found below.

REPORTS OF THE CATTLE SHOW AT BRIGHTON, ON WEDNESDAY, OCT. 9TH, 1822.

No. 1. *On all the larger horned Cattle (except heifers.)*

The Committee report that the animals in this branch of live stock, were unusually numerous, and good, proving, that a gradual and regular improvement is steadily, and as rapidly as could be expected, taking place. The number of entries for premiums, in this department alone, amounted to 42, and of individuals (many entries comprising more than one) to 52, while the whole number of premiums offered, and granted, are only 10, so that four fifths of the competitors were necessarily thrown out. This is inevitable, unless our funds should be exceedingly increased, or unless we should make our premiums smaller, and more numerous. This might be liable to great objection, by extending rewards to animals of inferior merit, and thus diminishing the motives to make the breeds as perfect as possible. While the beneficial effects of the liberal premiums offered by the Society, for the importation of the most improved breeds of foreign countries, is every year evinced by the crowds which, from the beginning to the end of our shows, gather round the imported animals, and their improved progeny, we ought never to forget the sound advice of the venerable farmer who addressed the Society this year, "that the progress of improvement by foreign crosses must be very slow"; and possessing as we unquestionably do, the materials among our own stock of improving our breeds by careful selection, we should follow the example of Bakewell and the other British farmers, who in fifty years have raised the stock of Great Britain to a state of perfection little short of what it is supposed they can ever reach. And, who at the late show had the pleasure of viewing those fine animals, Denton and Cœlebs, could doubt whether they were superior to any animals of the same description now to be found in New England? And why is this the case? Assuredly our pastures are as fine, and the race has not degenerated with us. Wherever a pride is felt in raising fine stock, our success is perfect, and the single town of Sutton might send its team of 120 oxen, and challenge Devonshire or any other county of Great Britain, to trials of strength or activity.

Let us then, on this occasion, earnestly solicit our farmers to select and propagate only the best individuals of their horned cattle. If they reply, we feel no encouragement to do this because we find the improved crosses always preferred at your shows, we reply that though this is partially true, it is not entirely so, and what would the farmer have us to do on such an occasion? If, in fact, the full blooded or half blooded descendant of imported stock is superior, shall we refuse to admit it *so* to be? This would be indeed sacrificing the best interests of our country in relation to this object, as well as violating our solemn pledges, to gratify an improper national prejudice. Our true course is to strive to equal or surpass the foreign races by selections and careful management of our native stock. It was upon this principle that our manufactures have been built up on the only solid foundation. Instead of complaining that foreign goods were preferred, our citizens have exerted themselves to make our own *better* as wel as *cheaper*; and let Manchester and Yorkshire beware, lest they find themselves not only shut out from *our* markets, (not by prohibitions but by skill and industry), but eventually rivalled in those of foreign countries. These preliminary remarks are not only intended to allay, or diminish any feeling of discontent at our impartial preference of the best stock, from whatever country it may have been originally derived, but to encourage our own farmers. to take more efficient measures for the amelioration and improvement of our own native breeds. They cannot attend one of our shows, without perceiving the *public preference* for the new races, and this is a strong confirmation of the justice of the decisions, though we are aware that it is not the least difficult task of the Committee to endeavor to decide without any bias from this clearly pronounced opinion of all the bystanders.

We have said that the imported stock and their progeny have usually been preferred by the visitors at our shows;—we would make *one exception*, and that is, with respect to milch cows. Although the milch cows of Great Britain and the Netherlands are *in general* far, infinitely, superior to our own;—yet during the 6 years in which I have had this unpleasant duty to perform, I have never seen an imported cow of equal merit (taking the positive evidence of qualities, the quantity and quality of milk into view) with some of our own which have been offered. So fully am I convinced of this truth, as well as that our country possesses a very considerable number of these fine cows, that I am persuaded, that, if Great Britain or the Netherlands were to send us ten cows each, of the best quality, New England alone could furnish twenty, which would equal them in the quantities of milk, butter and cheese, which they would respectively produce. If this should be true, and I have no doubt of it, we at least possess *one* of the parents in perfection, from which an improved race might be procured. This opinion is not expressed lightly. We infer its truth from an examination of the products of foreign cows, thought to be so extraordinary as to merit notice in their periodical journals; and during our short period of exhibitions, we have had several, which have equalled the best, of which any accounts have been published. But we would wish, that it should be distinctly understood, that we refer only to a small part of our milch cows, and that we fear much the greater number are lamentably poor. We are well convinced, that some dairies in our country, with two good cows, produce as much as the *average* of those which have five. If we are correct, or nearly so, in the opinion above expressed, how does it happen that our breed of cattle on the whole is so inferior? Because the owner of a good cow, instead of putting a proper value upon her, will generally send her to the nearest scrub bull, to save a little labor, and some trifling difference of expense. This we all feel and know to be true. But this shameful negligence is giving place to more judicious measures, owing principally to the effect of the public shows. If every owner of a good, and very superior cow, would consider her in a proper light, not merely as a valuable animal during her life, but as capable of improving his whole stock—if he will spare no moderate expense in procuring calves from her, from bulls of an improved breed, we shall soon see our whole stock gradually improve. Bakewell and Princeps, among the most distinguished raisers of stock in Great Britain, lived to see their improvements eminently successful. We are fully aware that all this exhortation and argument is of very little importance, compared with the more substantial proofs *derived from prices*.—When, therefore, our farmers learn, that a calf of six months, has been sold at the price of four ordinary cows, of five years old, who have consumed twelve tons of hay, including pasturage, and have required great labour in attending on them; when they hear such a fact as this, that an excellent judge offered fifty dollars for a two months calf, of the cow hereinafter mentioned, owned by the Hon. Mr. Gray, they produce more conviction than any other sort of address.

Before we announce the premiums, we would express the thanks of the Trustees to those Gentlemen, who without claiming any reward, and purely with the view of giving aid to the show, exhibited fine animals at no small expense and trouble. It is probable that as the Committee took no minutes of these animals, some of them may be overlooked. *One* we could not forget—the fine imported bull Denton, belonging to Stephen Williams, Esq. of Northborough. He has improved with age, and shows that he has an owner who is sensible of his great value. Nor could any one overlook Cœlebs, owned by Major Jaques, of Charlestown. If there had not been any other animals on the ground, those who are fond of viewing fine natural productions, would feel that a visit to Brighton was well repaid by the sight and comparison of these animals, differing considerably to be sure, but each very remarkable for beauty. There was also a fine imported cow, with her calf, lately bought by the Hon. Mr. Gray, for 200 dollars. Such liberal prices will ensure a constant and gradual improvement of our stock.—It is said that this cow is very remarkable for the quantity and quality of her milk—we have heard that she had given in England 36 quarts per day, but there was no person to give us any accurate account of her. Capt. Tracy, of the London Packet, added a new proof, to the many he has already given, of his zeal for the promotion of the Agriculture of his country, by exhibiting three young horned animals, just imported by him. Major Jaques also exhibited three fine cows, without asking a premium.

After so long a trial of the patience of the Competitors by these introductory remarks, many of which competitors will however, be *disappointed quite as early* as they would wish—

The Committee awarded the premium:

For the best fat ox, 6 years old, to Oliver Star, of Deerfield, weighing 2333 pounds, $40

For the next best do. 6 years old, to Lewis Barnard, of Worcester, weight 2256, $30

For the next best do. 5½ years old, to Amos Davis, of Groton, weight 1292, $20

For the best bull, to Major Jaques, of Charlestown, $30

For the next best do. to Joshua Coolidge, of Watertown, $20

For the best bull calf, to Uriah Manning, of Woburn, being the progeny of *Cœlebs*, $15

For the next bull calf, the progeny of *Denton*, to the Hon. Levi Lincoln, of Worcester, $8

For the best milch cow, to John Bart, of Salem, $30

For the next best do. to Samuel Murden, of Milton, $20

For the next best do. to the Hon. John Welles, of Dorchester, $15

As to milch cows, one of the most important, as well as most difficult articles to decide upon, the Committee proceeded, as they will probably hereafter always proceed, solely on evidence as to the *actual* product. The clearer this evidence, the more certain the success. The goodness of a milch cow depends on so many circumstances, and all of them so important, that the committee are obliged to extend their inquiries very far. Form and beauty is of some moment, but it is also sometimes fallacious; and no one would reject a fine cow, which should give an uncommon quantity of fine milk—butter superior in quantity and quality—continue to give milk every year, till within one week of calving, merely because she had a great head, or a large frame, or small teats, or, in short, because she had not any one of the *fine points* described in the "complete grazier." In this, as in every thing else, we must not always trust wholly to the *exterior*.

It has been usual to notice those animals of considerable merit, which deserved attention, but did not obtain premiums. I have never been satisfied with this course. Its tendency is in some degree to lessen the value of the rewards we bestow, if we praise too much those which were not successful; and after all we only shift the mortification, and make it fall with more severity on the greater number whose animals are not noticed—but as it is the usage, we comply with it. There was a very fat ox presented by Mr. Savary. He was fatter than some of those which obtained the premium, but the difference of age decided the question against him. There were fine bulls offered by Mr. Warren, Mr. Ward, Mr. Rice, Mr. Patch, of the fine native breed, so often noticed by us,—and by Mrs. Amory, of the Cœlebs Breed, one of which took a premium last year. There was also a superior Holland Bull, imported by Mr. Forrester, offered for exhibition only.

The best bull calf, not noticed in the premiums, was Mr. Lee's, of Brooklyn, Major Jaques' and Dr. Chaplin's. Many others were also very fine.

Of the cows, Capt. Inglee's, of Dorchester, were very remarkable—and also Mr. Brigham's, Job Ranger's and H. Warren's, both of New Braintree—but we have already explained the principles of our decision as to milch cows, which we hope will be satisfactory.

The Committee have endeavoured to give general satisfaction and if they have failed of that, they will at least have the pleasure of having satisfied themselves.

JOHN LOWELL, *Chairman.*

REPORT No. 2—*On the Smaller Animals.*

The Committee of the Massachusetts Society for the Promotion of Agriculture, appointed to decide on all the smaller class of animals including heifers.

REPORT:

That twenty-five animals of the class of "heifers, of from one to three years old," were in the pens for premium or exhibition—all of an excellent quality, and most of them of approved breeds. And generally indicating the increasing attention of the agricultural interest to this important class of stock. The general improvement in this class of animals, compared with our former Cattle Shows, was very marked and decided.

The first premium was awarded for a heifer owned by Henry Rice, Esq. of Marlborough.—She was of the breed of "Denton," the celebrated imported bull owned by Stephen Williams, Esq. of Northborough. This heifer was two years old on the first of February, from a cow of the Princeton breed; her form and figure strongly indicative of her sire. The heifer sucked only 12 weeks, has had no other keeping than common pasturage and *Meadow hay* in the winter. She calved in May; at six weeks her calf weighed 88 lbs. (the quarter) and never took all her milk until it was five weeks old. This heifer has given from twelve to fourteen quarts of milk during the season, - $15

The second premium was awarded for the heifer owned by Mr. Samuel Brooks, of Brighton, who had also received no extra keep, and was a beautiful sample of the approved Holderness breed, introduced into the state by Gorham Parsons, Esq. $10

There were other distinguished animals of this class, which deserve particular notice and were highly approved. Such were these that belong to Mr. Wheeler of Framingham also of the Holderness breed. Those presented by the Hon. Mr. Lincoln, also of the Denton breed, and were animals of beauty and promise.

Five hiefers belonging to the Hon. Mr. Welles, of his own improved stock; which has on former occasions had distinguished notice by committees of this society.

To these ought to be added the heifer of Mr. Coolidge, and that of Francis Amory, Esq. from Mr. Coolidge's imported bull Cœlebs ; and also those of Mr. John Breed, of Bellesple, from Mr. Thorndike's bull "Fill Pail," all partaking strongly of the excellent and peculiar qualities of their respective breeds.

The Committee also award for the best Boar—

The first premium to Joseph Rice, of ——, the sum of	$10
The second premium for the best Boar, they awarded to Mr. Spark Vose, of Watertown, the sum of	$5
The first premium for the best Store Pigs, they award to Mr. Luke Fiske, of Waltham, the sum of	$10
The second premium for the best Store Pigs, they award to Mr. Aaron Dow, of Brookline, the sum of	$5
The first premium for the best Merino Ram, they award to Gorham Parsons, Esq.	$15
The committee regret to observe that the general specimen of Merino sheep exhibited for premium, were, in their opinion, inferior to those of former years. They feel themselves justified only in awarding a second premium for the best Merino Ewes to Gen. Austin	$10
The second premium for Merino Wethers they award to Francis Amory, Esq.	$10
For Native Wethers there was no competition. Those presented by Mr. Silas Hall, of Phillipston, were very fine animals, and deemed worthy of the first premium, which the committee accordingly award, of	$10

Upon condition that he give evidence according to the rules, that they were wholly bred in this state, and raised by the persons exhibiting them.

A pair of Stags were presented by Mr. Meriam, of Concord, as a specimen of a new mode of altering cattle ; and which he represented as easier, equally effectual, and less dangerous than the ordinary method. Your committee were not authorized to grant any premium on this account. Nor can they recommend any to be given, without a more satisfactory evidence of the success of the operation and of all the advantages specified.—Should this be the case, at any future time, it will always be in the power, and they doubt not it will be the inclination of the trustees to grant a just reward for this, as well as for any other successful improvement in the important operations of agriculture.

Mr. Meriam also presented several spayed Sows, for the society's premium for animals of that description ; but they were not accompanied by any statement of the mode of operation and treatment as required by the rules established by the Trustees, and besides, the operations were very recent, and apparently some of them at least, done expressly for the exhibition, and for the purpose of offering for the premium. Now in a case of this nature, when a premium is proposed expressly for the purpose of testing the efficacy of an important, and in this country, in some respects, a new operation, your committee apprehend that no premium ought to be granted, unless by well attested experiments, supported by a lapse of time sufficient to leave no question of the result.

Mr. John Baker had entered also four spayed sows, belonging to Gorham Parsons, Esq. for the premium proposed for the same operation. They were in fine health and completely healed—neither disfigured nor weakened by the operation.—A certificate also accompanied, made by Gorham Parsons, Esq. which will be laid before the Trustees for their consideration, conformable to their proposal, and in case the same shall be considered, or shall be made satisfactory to them, they in such case award to Mr. Baker the premium of $20

Samuel Jaques, Esq. also presented for the Society's premium, of the improved Leicester breed of long wooled sheep, having a cross of the South down, one Ram and six Ewes. They were bought by him in Pennsylvania, and from thence brought into this State. Although your Committee know that the intention of the Society, in the proposal offered in the terms of that premium was, to encourage the importation of the animals from some foreign kingdom or state ; and, that therefore strictly speaking, Col. Jaques would be entitled to no premium on the terms of those proposals ; yet your Committee consider the animals are in this State a new and very important race of Sheep, although precisely not of the description proposed, and that Col. Jaques has at considerable expense and trouble, introduced them into it. They, therefore recommend that a premium be granted to him of $50.

The Hon. Thomas H. Perkins, Esq. also presented for exhibition, a Ram and two Ewes of the long wooled Sheep of the Netherlands, the length of whose wool was greatly superior, and its fineness but little inferior, if at all, to those of our present breeds. And although it was not the intention of that distinguished merchant to stand candidate for any premium, his sole purpose being to aid in the improvement of our breed of Sheep, and thereby to encourage the agriculture and manufactures of his native State, yet your Committee apprehending that all exertions of this kind, so honourable to the individual, and so advantageous to the community, should receive some mark from our Society of its sense of the benefit conferred on the Commonwealth; they therefore recommend that the gold medal of the Society, of the value of fifty dollars, be presented to Mr. Perkins, for this distinguished and successful effort to improve the breed of Sheep in Massachusetts.

JOSIAH QUINCY,
NATH'L INGERSOLL,
THOMAS WILLIAMS,
Noddle's Island.

REPORT NO. 3.—*ON MANUFACTURES.*

BRIGHTON, OCT. 10TH, 1822.

The Committee on Manufactures award:

The first premium for Broadcloths, to James Shepherd & Co. of Northampton,	$30
The second premium for Broadcloths, to the Wolcott Wollen Manufacturing Co.	20
The first premium for Household Cloth, to Jona. Mann, of Worcester,	12
The second premium for do. to Stephen Butrick, of Framingham.	8
The first premium for Superfine Cassimere, to the Wolcott Woollen Manufacturing Co.	15
The second premium for do. to Jas. Shepherd & Co. of Northampton	10
The first premium for Superfine Satinet, to Daniel Ellis & Son, of Walpole	10
The first premium for fine Flannel, to James Howarth, of Andover	10
The first premium for Carpeting, to Sarah Patrick, of Worcester	15
The second premium for do. to Adolphus Bartholomew	7
The first premium for Linen Cloth, to Anna R. Putnam, of Grafton	8
The first premium for Diaper, to Mrs. Butnam	10
The second premium for do. to Susan Young, of Newbury	5
The first premium for Sewing Silk, to Lem'l Healy, of Dudley	5
The second prem. for do. to Caroline Bronsdon, of Milton	3

The following gratuities are also awarded :

To Clarissa Fay, of New Braintree, for a very good specimen of fine Flannel $5

A premium being withheld on account of a deficiency in the number of yards, the Committee recommend the gratuity into consideration of the excellence of the fabrick and the importance of the manufacture.—And for the same reasons a gratuity of $5

To Susan Warren, of Chelmsford, for a piece of Linen of household manufacture.

To George Johnson, of Salem, for a specimen of Duck by machinery of recent invention 10

[This Duck is thought superior to any brought to this market from Europe, and can be afforded at a price advantageous to the purchaser. The character of the machinery employed, and the quality of the article, afford a hope that duck may become one of our staple articles.]

To Gerry Fairbanks, of Boston, for fine Beaver Hats $20

[Hats of the same quality are still imported.—The committee have therefore recommended a liberal gratuity in this case, as there is both stock and skill enough in the country to put a stop to the importation.]

At former exhibitions the imitation Leghorn Hats have been of a medium quality ; this year there was one specimen from Vermont perhaps finer than any ever imported. As it was manufactured in another State, the committee are not authorized to do more than to commend the excellence of the fabrick.

For other specimens of Straw and Grass manufacture, they recommend gratuities as follows:

To Ann Dalrymple, of Marlboro', for Straw Bonnets	$5
To Mariam Haven, of Hopkinton, for do.	5
To Sally and Eliza Perry, of Brookfield, for a Grass Hat	5
To Betsey Bennett, of Framingham, for an imitation Leghorn Straw	5
To Susan Sherman, of Marlboro', for do.	3
To Mary and Hannah Dobben, of Beverly, for Straw Bonnets	3

Gratuities to the following persons are likewise recommended for their specimens of ingenuity and industry:

To Fanny Peirce, of New Braintree, for a counterpane and coverlet	5
To Sally Penniman, of New Braintree, for a Hearth Rug	3
To Caroline Fiske, of Waltham, for a counterpane	3
To Susan Stearns, of Waltham, for a knit mantle of cotton yarn.	2
To Mehitable R. Dean, of Mansfield, for a Hearth Rug	3
To Priscilla Cotton, of Plymouth, for a Hearth Rug	3
To Samuel B. Pope, of Boston, for a specimen of Men's Boots	5
To Ann Heath, of Roxbury, for a specimen of fine Cotton Hose	5
To Rebecca Johnson, of Boston, for a Hearth Rug	3
To Sarah Glover, of Dorchester, for a cotton counterpane	3
To Rhoda Holman, of Bolton, for a fabrick of Silk weed	2
To Levi Sawyer, of Bolton, for Woollen Hose	2
To a female of Boston, for very fine Hose of Merino Wool	2
To Sarah Moore, of Brighton, for fine Down Tippets	2
To Sarah, Polly and Hannah Lewis, for various articles manufactured from Down and for *Artificial Flowers*	6

To Nancy Wheeler, of Worcester, for Fans manufactured from Feathers

Messrs. Barrett, Tileston & Co. of Staten Island, presented for inspection some very handsome Woollen Table Cloths and Silk Handkerchiefs as specimens of their work in the art of Printing and Dying. These deserve mention as highly creditable to the taste and skill of the manufacturers. The Handkerchiefs exhibited were originally striped and cross-barred silks.—They were shop goods damaged—the original colors were extracted—they were redyed and printed as exhibited.

With respect to the progres of our principal woollen manufactures, the Committee think it may be useful on this occasion to remark—that Flannels of every degree of fineness required for home consumption may be manufactured at reasonable prices with the machinery and skill now in the country. That our best cassimeres are substantial, well made and well finished, and approach nearer to those of first quality made in England, than our best broadcloths do to the best of that country.

That our best Broadcloths are improving progressively with the gain of experience, and faster as respects goodness and the style of finishing than fineness, and there is still room for improvement in the dying and dressing.

There were no extra fine Broadcloths at the exhibition. This may be accounted for without discrediting the manufacturers, by adverting to the fact that there is a full demand for cloths of a medium quality, at prices which give a large profit; the manufacturers are under no inducement therefore to attempt extra fine cloths. However much it might gratify our pride to see cloths of this description spread before the public at our annual exhibitions, it is neither for the interest of the manufacturer nor of the country, that it should at present be gratified. The best cloths shown at the hall this year, were some pieces from the Litchfield Woollen Factory in Connecticut, offered not for premium but for exhibition; and these were thought by the Committee deserving of an honorable mention on this occasion. No Cotton Cloths were exhibited; and this among other circumstances may be considered as proof that they require no encouragement beyond that afforded by the present good market.

RICHARD SULLIVAN, } *Committee.*
WM. LAWRENCE, }

REPORT NO. 4.—*INVENTIONS.*

The Committee of the Massachusetts Society for the promotion of agriculture to whom were referred the subject of inventions, report—

That they have had the gratification of inspecting a number of machines connected with the facilitating manufactures and the labours of agriculture, which have been deposited in the society's room, but none coming within the exact terms of their commission, except a Cast Iron Roller, which was duly entered for premium by Aaron Willard, of Boston. This roller is apparently an improvement on the ordinary roller. It consists of two rollers moving upon one axis, and thereby turns easier and makes less ridges. But the owner not being present nor any person in his behalf, the Committee have not been able to make those inquiries which are necessary to enable them to award any premium.

The next machine presented for their examination and entered for premium, was a vertical family spinner, invented by John Brown, of Providence, and presented for premium by J. R. Newell. It is apparently capable of spinning with from six to twelve spindles, and it was stated to your Committee that a girl of fifteen years of age of common capacity is capable of tending it—that the thread may be gaged at any number which may be wanted. The size is very compact and takes up a less number of square feet on the floor, than a common spinning wheel. But the Committee had no certificate of its power or evidence of its being used in any family, and found to be by experiment capable of facilitating domestic spinning. In their opinion this is the only test of its real utility. They think it a sufficiently simple and ingenious machine. But whether it will perform all that is promised, your Committee, are for the reason above stated, not able to decide; and the machine not being within any of the specified objects of premium, your Committee do not deem themselves justified in recommending under the circumstances, any specific premium.

The machine which most attracted the attention of your Committee, was one presented by Joseph Pope, Esq. of Boston, a gentleman long known by the public by his inventions and mechanical ingenuity. This machine is patented—intended to work by hand, in its present model, but easily capable of being enlarged and applied to a horse power.

The material to be threshed, passes through opposite sets of surfaces placed transversely in a frame. They are respectively moving rods—and constitute a threshing power on an open floor composed of stationary rods.

It was stated to your Committee that it threshed fifty bushels of grain in 12 hours—and four bushels and 12 quarts of oats in one hour—and that a common sized sheaf passes through it and is completely threshed in one minute. The labor is done by two hands, one destined to turn it, the other to feed it, or one man and two boys are sufficient for the same purpose.

In the experiment made before the Committee, it threshed the grain out perfectly. And it is obvious that with a very small expense, it may be converted into a machine for cutting straw without any injury to its threshing power.

Owing to an accident, for which the owner of the machine is not responsible, it was not duly enentered, although it was brought to Brighton and deposited in the society's room in proper season for that purpose.

As your Committee consider the machine as likely to be very useful, and as Mr. Pope has been at great expense and trouble for the purpose of bringing it to Brighton, your committee apprehend that some notice ought to be taken of it, and they therefore recommend that he should have a premium of $20, he producing the requisite certificates of its being used and approved by a practical farmer.

Mr. Newell also presented for premium a cornsheller, on a horizontal movement, on a wooden barrel.

The Committee did not see its power, but apprehend it may be made a useful machine, with some improvement, but do not consider themselves authorized in its present state to award a premium.

The same gentleman presented for exhibition a number of excellent and approved English machines, and also some of the invention of this country, among these they notice

An English Turnip Cutter.
Three Double Mould Ploughs.
Batson's Scarifier.
Batson's Cultivator.
Howard's Patent Plough.

Also, an English hay maker, sent from Baltimore. All of them are worthy of the attention of gentlemen interested in improving the agriculture of the country, and their being brought to Brighton for exhibition, does great credit to the attention and zeal of Mr. Newell.

A patent threshing machine invented by —— and also a patent hulling or smut machine, accompanied by strong and numerous printed recommendations, were presented for the inspection of your Committee, but they had no opportunity to judge of their respective operations.

JOSIAH QUINCEY,
CYRUS ALGER,
PAUL MOODY.

NO. 5.—*WORKEN OXEN.*

The Committee appointed by the Massachusetts Society for Promoting Agriculture, to decide on the claims for premium for the best *Working Oxen*, at the Cattle Show at Brighton, Oct. 10, consisting of John Welles, Silas Gates and Elijah Perry,

REPORT:

That they were well pleased to find amongst the other distinguished evidences of improvement at their show, an increased number of Working Cattle, superior to any previous exhibition.

Twelve yoke of Working Oxen were entered and appeared to contest for the premiums offered by the Society.

The Cattle were in general in their training more perfect, and the committee feel confident that the community may look forward to the most gratifying results.

After taking into view the *strength* in reference to their *age* and *size*, the *equality* of *match*, the docility and *training*, as well as other *general circumstances*, the Committee unanimously agreed to award the following premiuns:

To Luther Whitney, of Sutton, first premium	$30 00
To Peter Darling, of Sutton, second premium	25 00
To John Sherman, of Sutton, third premium	20 00
To Daniel Marble, of Sutton, half of the fourth premium	7 50
To Jonas L. Sibley, of Sutton, the other half of the fourth premium	7 50
To Capt. Joseph Curtis, of Roxbury, the fifth premium	10 00

The Committee were all pleased to see so favourable an illustration of the benefit of the Ox Team, as was generally presented, the use of which cannot but be considered as including the most essential interests of the state.

To the honour of a small but respectable section of the country it receives a principal part of the premiums of the Society. But it is believed that no man will doubt the distinction is well merited. It is to be hoped that other parts of the state will feel excited to such an exertion as will spread the evidences of our farmers care and skill more equally over the state, and thus the great object of the Society in the advancement of the honour and interest of the Commonwealth be promoted.

(Signed) J. WELLES, *Chairman.*

No. 6.—*Ploughing Match.*

The Committee on the Ploughing Match, consisting of John Prince, Benjamin Goddard, and S. G. Derby, having attended the duty assigned them, beg leave to

REPORT;

That the ground selected for the purpose by the Committee of Arrangements, was a very though green sward of 20 years lay, and had been chiefly used as pasture for fat cattle, was previously laid off in lots of sixteen rods long and one and a quarter rods wide, making one eighth of an acre, (which was less than was wished, but being the only spot convenient that could be procured, could not admit of their being larger)—the soil excellent and free from stones or trees, and each team had a perfectly equal chance. The ploughs were duly entered for the contest, and the ploughmen drew for lots as follows:

No. 1.—Aaron Davis Williams, of Roxbury, one pair of oxen, Lewis Bliss ploughman, David Howe driver—Warren's Dedham plough, with wheel and cutter—18 furrows—finished in 34 minutes.

No. 2.—Jonas L. Sibley, of Sutton, one pair of oxen, Samuel Sibley ploughman, Peter Darling 2d driver—Common Sutton plough, with wheel—17 furrows—23 minutes.

No. 3.—Stedman Williams, of Roxbury, two pair of oxen, Stedman Williams, ploughman, Samuel Prince driver—Warren's of Dedham plough, with wheel—18 furrows—26 minutes 30 seconds.

No. 4.—Joseph Curtis, of Roxbury, two pair oxen, Luke Rollins ploughman, Amos Wyman driver—Warren's Dedham plough, with wheels and cutter—20 furrows—27 minutes 30 seconds.

No. 5.—Luther Whiting, of Sutton, two pair oxen, Royal T. Marble ploughman, Luther Whiting driver—Sutton plough, with wheel—16—furrows—30 minnutes.

No. 6.—Aaron D. Williams, of Roxbury, one pair oxen, Thomas Howe *ploughman and driver*—Warren of Dedham plough, with wheel —19 furrows—46 minutes.

No. 7.—Silas Dudley, of Sutton two pair oxen, Silas Dudley ploughman, Joseph Dudley driver —Warren of Dedham plough, with wheel and cutter—17 furrows—26 minutes.

No. 8.—Isaac Cook, of Brookline, one pair oxen, Caleb Miller *ploughman and driver*—Warren of Dedham plough, with wheel and cutter—19 furrows—33 minutes.

No. 9.—Moses Seaver, of Brighton, one pair oxen, Moses Seaver ploughman, Benjamin Porter driver—Howard of Hingham's plough with weel—20 furrows—24 minutes.

No. 10.—John Sherman, of Sutton, one pair oxen, Asa Cummings ploughman, John Sherman driver—Sutton plough with wheel—18 furrows —22 minutes.

Previous to the ploughing, it was distinctly stated by the committee, that the furrow must be not less than 5½ inches deep, and their greatest wish as little to exceed 10 inches in the width of furrow as was possible, and not to hurry their cattle, as they conceived the *best work* could not be performed if over driven—and that goodness of work, together with that of cattle, would be a great object in deciding premiums, as well as cheapness of labour.

They have great pleasure in stating, that the work was well done, and most of it in a superior style, and that those competitors who failed in obtaining premiums, was because the Committee had it in their power to award only three among ten claimants—indeed, they conceive praise is due to all the ploughmen, who discovered great skill in the management of their implements, and the cattle were universally excellent—and in consequence of the request of the Committee that they should not be hurried, they could generally have proceeded in another one eighth of an acre with ease.

The Committee have been unanimous in their awards after a very critical examination, as follows:

1st premium to Isaac Cook	$20
Caleb Miller, ploughman	10
do. do. driver	5—35
2d premium to Joseph Curtis	12
Luke Rollins, ploughman	6
Amos Wyman, driver	3—21
3d premium to Stedman Williams	8
do. do. ploughman	4
Samuel Prince, driver	2—14
	$70

All which is submitted,

JOHN PRINCE,
BENJAMIN GODDARD,
SAMUEL G. DERBY.

No. 7.—*Agricultural Experiments.*

The committee on Agricultural Experiments, to whom was also committed the inspection of sundry articles of Manufacture, for which premiums were offered,

REPORT:

That five several parcels of Cheese, of more than one year old; and seventeen parcels of new Cheese, were offered for the Society's premiums; which, in the opinion of your committee, are superior to any hitherto exhibited; all made in the town of New Braintree, in the county of Worcester, excepting one parcel of five cheeses, made by Mr. John Ayres, of Oakham in the same county; of the former, that from the dairy of Capt. John Hunter, was considered to be the richest and best made cheese, and is entitled to the premium of ten dollars; that from the dairy of Capt. Ebenezer Tidd, the next best, and is entitled to the premium of five dollars. Of the new Cheese, that from the dairy of Mr. William Earl, was considered to be the best, and is entitled to the premium of ten dollars; that from the dairy of Major Roswell Converse, the next best, and is entitled to the premium of five dollars.

Several parcels of fine flavored Butter were also exhibited, uncommonly well made, the buttermilk being more perfectly expressed than usual; that from the dairy of Miss Mary Clark, of Watertown, in the County of Middlesex, was considered to be the best; that from the dairy of Col. Stephen Hastings, of Sterling, in the County of Worcester, the next best—the former is entitled to the premium of ten dollars, and the latter to the premium of five dollars.

For the greatest quantity of Butter and Cheese, made between the 15th day of May, and the first day of October, from not less than four cows. the quantity of the Butter and of the Cheese, and the number of cows, to be taken into consideration, Mr. William Earl, of New Braintree, has exhibited sufficient testimony, in the opinion of your committee, to entitle him to the premium of twenty dollars.

Messrs. Brewer and Jordan, of Roxbury, are entitled to the premium of ten dollars, for the best specimen of Sole Leather; for the next best specimen, Messrs. Benjamin Mirick & Co. also of Roxbury, are entitled to the premium of five dollars.

Five barrels of Flour, from the wheat raised the present season, on the farm of Gorham Parsons, Esq. in Brighton, and manufactured at the "City Mills," lately erected on the "Western Avenue," very little inferior in quality to the best made Philadelphia flour, were exhibited by Mr. Benjamin T. Reed, Agent of the Proprietors of said Mills, and are entitled to the premium of twenty-five dollars.

A sample of Starch, in imitation of the Poland Starch, manufactured by Mr. Robert Hewes, of Boston; and a sample of Mustard, manufactured by Mr. Abraham Bickford, also of Boston, were exhibited—both appeared to be of a very good quality, perhaps equal to any imported; no premiums the present year, for either of these articles, were offered by the Trustees.

The vegetables brought to the Society's Hall very far exceeded in quantity, variety, and size, those exhibited in any former year. The roots of Mangel Wurtzel, sent by Dr. Chaplin, of Cambridgeport, were very large, and in great perfection. The Doctor also presented to the Society a very fine Watermelon, from his own garden, which weighed about twenty-three pounds. From the farm of Edward Sparhawk, Esq. of Brighton, some "Silverskin" Onions, uncommonly large. From the garden of Mr. William Ackres, of Brooklyne, some roots of the common Red Beat, of an early kind, and of a size seldom equalled. Mr. Josiah Coolidge, of Cambridge, and Mr. Samuel Murdock, of Milton, exhibited some very large Winter Squashes. One from the farm of the former weighed forty-seven pounds. From the farm of General Hull, in Newton, some Carrots, Ruta Baga, and English Turnips, all of them very large, "taken from a field of two acres, without any cultivation, but what was common to the whole field." From the farm of Capt. N. Ingersoll, of Brooklyne, some Amak, being a new variety of the Carrot. From the orchard of Mr. Henry Houghton, of Bolton, in the County of Worcester, some Blue Pearmains, which were supposed to weigh not less than one pound each. From the garden of James White, Esq. in Dorchester, in the County of Norfolk, two specimens of the Cotton Plant, which grew in the open air, without particular care; one of which was Sea Island, the other Upland. The pods on both were well filled with Cotton.

From the farm of Captain Joseph Warren, in Brighton, some ears of Corn, said to be of a very productive kind, "from three stalks ten ears were taken." From the orchard of Col. James Wilder, in Sterling, a very large fine Apple, called "Eve's Apples." From the farm of Dr. Eliakim Morse, in Watertown, some fine ears of the eight and twelve rowed Indian Corn.

By order of the Committee,
THOS. L. WINTHROP, *Chairman.*
October 9th, 1822.

The claims for premiums on Agricultural experiments, will not be decided until the Trustees' Meeting in December; affording time for the competitors to offer the evidence required. The Committee will make an additional Report soon after that period.

BRIGHTON TOASTS.

At the anniversary Dinner, there were a number of good, some complimentary, and a few sparkling Toasts drunk. We have room for a few of them.

The *Coulter* on the land—the *Keel* on the sea—May the first run deep and both run clear: and all who hold the handle or the helm, find honor and reward.

Our mother Earth—May those have the best *share* in her affections, who take the *plough share*.

The world—A great Cattle Show, where the best animals are those who are not *overfleshy* nor *underfed*.

The noblest part of our exhibition—that which is above price, and needs no premium—the Show of New England Yeomanry.

By Professor *Everett*—Colleges, Universities, and Cattle Shows—May all their *pens* do them equal credit.

By Hon. Mr. *Quincy*—The Presidential Ploughing Match—May the working ox beat the fillies.

By *George Blake*, Esq.—The American *Plough* and the American *Prow*—May theirs be the victory on the *Plain* as on the *Main*.

FROM THE NEW ENGLAND FARMER.

This is the season when farmers are gathering in their produce and estimating the quantities. They may readily measure their grain by the bushel, and weigh their flax by the pound; but to ascertain the number of their gallons of cider they will find attended with difficulty.

Some years ago I undertook to write a new treatise of arithmetic, better adapted to the capacity of the learner and agricultural business than any heretofore published; in the composing of which I did not take any thing for granted, but demonstrated and proved every rule that I laid down.

In *gauging* I found that all the rules that any authors had laid down were either very erroneous, or required such a tedious calculation with a vast number of figures as to be liable to error, and that their diagonal and gauging rods were at best but a random way of guessing at the contents of casks of different proportions.

I tried various ways to raise a theorem more simple, plain and correct, than any that I could find published, and after nearly despairing of finding any better or more short than the rule laid down by the learned and ingenious James Ferguson, I accidentally hit on the following:

1st. Multiply the mean diameter by itself.
2d. Multiply the product by the length.
3d. Multiply that product by 34.
4th. Strike off four decimal points and you have the true contents in gallons and decimal parts of gallons.

The excellence of this rule is, it avoids the tedious process of any long division, and does not require one fourth part of the number of figures as the shortest rule laid down by James Ferguson, and it is equally correct in casks of any proportion.

The dimensions should be exactly taken with a scale that has the inches divided into tenths, and the work will stand as follows: Suppose the cask, Bung diameter, 28 inches.
Head do. 20
Length, 32 2)48
24 mean dia.
24
96
48
576
Multiply by length, 32
1152
1728
18432
Multiply by 34
73728
55296
62,6688

The true content is 62 gallons and ,6688 decimal parts of another gallon.

I could readily give a demonstration of this theorem on the principles of *Euclid*, but leave that as an exercise for the students of mathematicks, perhaps if they do not immediately hit on this theorem, they may some other.

This concise rule makes the small allowance that James Ferguson recommended for the spheroidical figure of casks, and if it deviates, it gives a little too much by the inside of the casks not being geometrically round.

If there is any readier way to find the contents of a cask, I believe I have it in a treatise I have written on a *new science*, that I call *Semi Geometry*, and which teaches how to project almost every thing necessary in country business, with a plain scale of equal parts, and pair of dividers, without any calculations by numbers. I carried it so far as to project extracting the *cube root and gauging casks*, and finding their ullage.

To find the contents of a cask by *semi geometry* is a very handsome projection, but the figure cannot be intelligibly described in a newspaper, without a large plate—yet, to such as are well versed in *Euclid* I may render myself intelligible, for to such if they are expert with a scale and dividers the contents of a cask, without any calculation, may be projected into a parallelogram, of equal contents superficial measure. That for a large cask, would be extensive, and may be reduced, although 231, the cubic inches in a gallon, is an uncouth number to divide—it will divide by 3 and 77 only; then suppose the parallelogram is projected for 3 inches deep, we have 77 to divide again, that will divide by 7 and 11 only, then project the reduced parallelogram to one of equal content 11 wide, then step off the gallons by 7.

Semi geometry is a science that all farmers ought to learn, in order to be ready to lay out any kind of farmers or mechanical business.

In my treatise of arithmetic I taught decimals with whole numbers from the first numeration table, in order to suit the currency of the United States. I taught that there was but simply the *nine* numbers in nature, that any thing further than nine was but repetition, according to place in the numeration table. That nine was the *Crown Number*, and would prove any calculation within the four rules in whole numbers, and taught how to prove them, as also if there was an error in multiplication to shew whether it was made in multiplying or adding, and if in long division whether in multiplying or subtracting.

When I came to treat of interest, I disliked very much any rules that I could find published for calculating interest for days or broken time, as the work was too tedious and too much lost in little fractional remainders to be correct. I tried a variety of ways to form some better and more exact rule that would not require so many figures—until I discoversed *nine proportionate Logarithms* (and there is no more in nature) that will shew the interest of any broken sum of dollars and cents for any broken time or number of days, or at any rate per cent—and bring out the whole in one sum to the ten thousandth part of of a cent, with less figuring than any other mode, and without any division, which I believe the greatest of my discoveries.

I shewed them at several of the banks that I could calculate interest quicker and more correct than any clerks they had—but they spurned at such instruction. I then tried to sell my *copy right* to several printers—they would not buy it because they said it was not like *Dilworth's* and other treatises. I told them if it was like other treatises there would be no need for them to buy it—and that if people would be such slaves to custom as not to look at any thing new, they never would advance in improvement.

At this advanced period of life I believe that my labours for the benefit of the public must die with me, except some few ideas that may be retailed in newspapers.

SAMUEL PRESTON.
Stockport, Pa. Sept. 19, 1822.

Representatives of the next Congress by the new apportionment.

The following is the rate of apportionment, according to which, the Members of the House of Representatives for the next Congress are to be chosen (the present Congress being composed according to the old ratio.) The whole number is 212, exclusive of the three territories; of whom

Maine has	7	North Carolina	13
New Hampshire	6	South Carolina	9
Massachusetts	13	Georgia	7
Rhode Island	2	Alabama	2
Connecticut	6	Mississippi	1
Vermont	5	Louisiana	3
New York	34	Tennessee	9
New Jersey	6	Kentucky	12
Pennsylvania	26	Ohio	14
Delaware	1	Indiana	3
Maryland	9	Illinois	1
Virginia	22	Missouri	1

From the London Farmer's Journal.

EXPERIMENTS ON SEED WHEAT WITH STEEPS, &c.

SIR, *Surry, 28th June*, 1822.

In consequence of the strong recommendation given to blue and green vitriol as a preventive of smut and slug, I was induced to try it in preparing the seed for two fields last autumn. By way of giving it a fair trial, I sowed about one third of each field with the preparation of each vitriol, and one third with only the common preparation of lime. The seed was free from smut, and so is the crop.† So far with *clean seed* I consider vitriol useless, but with seed infected with smut, the following experiment will show a different result.

I had given to me a sample of old Scotch wheat that appeared free from smut; this I divided into two parcels, to try if seed was easily impregnated with smut, and for this purpose I procured some smut balls, and rubbed one half of the seed with the dust. I then divided each parcel into seven others, and prepared and sowed 100 grains of each, on the 26th of October last, in the following manner.

The odd numbers refer to wheat taken from the sample; the even numbers to the wheat rubbed with smut balls.

EXPERIMENT.	RESULT.
1. The dry seed.	1. One grain produced six ears of smut.
2. Same.	2. Upwards of 100 ears of smut.
3. Wetted with spring water and dried with quick lime.	3. Free.
4. Same.	4. A few plants produced smut.
5. Boiling water poured on quick lime to make it the thickness of cream, wheat merely immersed and taken out to dry.	5. Free.
6. Same.	6. Free.
7. Green vitriol, proportion 1 lb. a bushel, seed steeped 3 hours.	7. Free.
8. Same.	8. A few plants produced smut.
9. Same, but dried with quick lime.	9. Free.
10. Same.	10. A few plants produced smut.
11. Blue vitriol, proportion ½ lb. a bushel, seed steeped three hours.	11. Free.

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† *One field was much injured by the slug and worm in the autumn, the other escaped.*

12. Same.	12. Free.
13. Same, but dried with quick lime.	13. Free.
14. Same.	14. Free.

Nearly every grain grew ; the wheat looks tolerably even, and remarkably well, but I am afraid the birds will destroy the corn before harvest, so that I shall not be able to give you an account of the different samples.

It appears from the above, that boiling water and quick lime, as well as blue vitriol, are effectual remedies against smut. But those steeped in vitriol lost most plant in the autumn, and suffered more from enemies than either of the others. I remain, your's, &c.

PHILOMEL.

OR THE AMERICAN FARMER.

TO MAKE A RABBIT WARREN.

Dig a pit from 4 to 6 feet wide, and 4 feet deep—8 or 10 feet long—set posts down at each corner, and let them come about 3 feet above the ground. Board up the sides, leaving the breadth of one plank on each side a foot from the ground unboarded. In this space dig holes in the wall a few inches at convenient distances, and put your English Rabbits in after it is covered and has a door with a lock and key. They will soon complete what you have left unfinished in the wall, by burrowing several feet into it—a plank should be fixed with hinges to trice up and to be let down by a string on each side over the holes, to enable you to catch them when you please, either for the purpose of altering the males, or of killing them for the table—never keep more than one male in the warren, for the sake of peace.

S. H.

Editorial Correspondence.

WINE, GRAPE CUTTINGS, CIDER, &c.

Vineyard, near George Town, D. C.
Sept. 17th, 1822.

J. S. Skinner, Esq.

'*Dear Sir*,—I have just finished making wine from my small Vineyard—I have four-tenths of an acre planted near my house. The cuttings remained one year in the nursery, and the year before last they were planted out where they now stand. The first year they took good root, the next they grew luxuriantly, and this is the first year of their bearing. Sixty-three vines of the Constantia have produced eighteen bushels of grapes, in the bunches, which made two quarter casks of wine of 28 gallons each. One hundred and fifty-eight vines of Tokay, &c. produced 47½ bushels of grapes. So that the whole vintage was 65½ bushels, and I find that a bushel of bunches yields about three gallons of juice. My vines are planted in rows 12 feet apart, and are 6 feet distant in the rows.

I have from the whole, made seven barrels and six quarter casks of wine. This is the first year of their bearing, and they cover, in all, about one acre of land. I have near four acres more, most of which will bear next year, and I intend to plant five acres next spring, so as to have about ten acres.

The quality of the wine is to be determined after it has gone through its vinous fermentation, which will be some time yet.

I shall next season have several thousand cuttings of vines for sale, of various kinds, foreign and domestic. Those from which I made my wine this year, are the Bland Madiera, Tokay, Constantia, Schuylkill Muscadell, and Munier, commonly called the Miller Burgundy, or blue English grape. I intend offering the cuttings for sale, in the proper season, at the following prices :

One dollar for a single dozen cuttings
Five ditto for one hundred ditto
Or five hundred for twenty dollars.

Persons who wish to buy, can write to me, *post paid*, and they will be attended to.

Will not your respectable, Maryland Agricultural Society offer premiums for the cultivation of Vineyards and Orchards, and the fabrication of Wine and Cider ?* I have found the book on Wine Making,† that you were so good as to lend me, exceedingly gratifying and most probably useful to me this summer.

A barrel of Tokay wine, made about two weeks since, has just been examined—I did not put a particle of spirit in it, yet this wine is very strong, and I believe it will have body enough to keep without spirit. Your's, respectfully,

JNO. ADLUM.

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* *We think they ought, and thank our correspondent too, for the suggestion.*

† *We shall re-publish this little English work, on Wine Making, by Dr. McCulloch, in the American Farmer, as soon as Mr. Adlum returns us our copy, for we think it gives in a compendious form the plainest and best instructions, that we have seen upon this important subject*—instructions *that will be useful in domestic or larger fabrications of fermented liquors—the healthfulness and value of which depend so much upon the judicious* or scientific *management of the vinous process We have derived more satisfactory or definite ideas, on the subject of fermentation, and the fafabrication of different kinds of wine, from this little work, than from all which we had previously read. The principles or agents which it explains or unfolds, are applicable to every vinous fermentation—and therefore a knowledge of this writer's doctrines will be useful to Brewers, Cider Makers, &c. Some of the best cider that we ever tasted, was made by rules derived from this treatise.*—Ed. Am. Farm.

FALL CHERRIES AND RUSSIAN RYE.

We have just received from Gen. Thomas M. Forman, specimens of Fall cherries, and a sample of flour made from rye, imported from Russia by our townsman, Major Isaac M'Kim, formerly placed with us for distribution, a part of which we gave to Gen. Forman, who divided it among his neighbours, with a prospect, as appears, of eventual benefit.

Savinton, Cæcil Co., E. Shore,
Maryland, Oct. 12th, 1822.

Dear Sir,

I send you a couple of Cherries as curiosities ; they ripened this fall on the tree I got of you. I send you also a sample of flour from the Russian rye, I got of you ; it's the first we have had of it—it's whiter than the flour of our common rye, I think, and makes a sweet bread—I have raised but little as yet, but shall sow more this fall than I have before done, and have seed to spare next season if applied for early.

Respectfully your's, &c.,
JOHN T. VEAZEY.

To Gen. Thomas M. Forman.

PRICES CURRENT.—corrected weekly.

White wheat of the first quality $1 30 to 1 40—Red do. $1 18 to 1 22—Old corn, 65 to 68 cts.—New do. 63 cents—Rye, 35 to 40 cents—Wharf Flour, $6 12½ cash—Howard street do. $6 50—Cotton, W. India, according to quality, 15 to 25 cents—New Orleans prime, per lb. 15 to 17—Georgia upland do. 13 to 14—Cheese, N. E. 10 12 cts.—Coal, Virginia, per bushel 25 to 30 cents—English, 40 cts.—Herrings, Susquehannah, No. 1, $2 75 to 3 50—do. do. No. 2, $2 50—Shad, trimmed, $7 50 to $8—do. No. 2, trimmed, $6 50 to $7—Hogs lard, fresh, per lb. 10 cts.—Beef, fresh, per lb. 6 to 10 cts.—Pork, per lb. 5 to 8 cts.—Veal, per lb. 6 to 10 cts.—Mutton, per lb. 5 to 8 cts.—Butter 31 to 37 cts.—Eggs, per dozen, 16 cts.—Potatoes, per bushel, 62 to 75 cts.—Hickory wood, per cord, $5 to $5 50—Oak, do. $3 25 to 3 75—Pine, do. $2 to 2 50.

Tobacco—No sales the present week.

THE FARMER.

BALTIMORE, FRIDAY, NOVEMBER 1, 1822.

RUTA BAGA SEED,

DIRECT FROM SWEDEN.

Two parcels of Ruta Baga, or Swedish Turnip Seed, have been recently shipped to the United States, for sale at a price merely covering the cost, by Christopher Hughes, Jr., Esq., our Chargé des Affaires at Stockholm. We have received one of the parcels, 220 lbs., and sold the same to our worthy neighbour Mr. Robert Sinclair of Baltimore, Manufacturer of Agricultural Implements, and Seedsman, as an elligible mode of accomplishing the laudable objects of Mr. Hughes, who had this seed raised and saved by eminent agriculturists of Sweden, that the Farmers of his own country might have an opportunity to cultivate so valuable a vegetable from genuine, *native* seed ; and be led thereafter to supply themselves, through the ordinary channels of trade, with seed direct from its native country, if the experiments should *here* establish, as they have done in England, the expediency of occasionally resorting to Sweden for fresh supplies of seed.

The parcel which we have sold to Mr. Robert Sinclair was raised by Count Schwerin, at the instance of Mr. Hughes, and request of Mr. Eric Swedenstierna, a repectable tradesman, to whom we are informed any one may hereafter confidently address themselves in the expectation of receiving genuine seeds, the growth of that country.

The other parcel being 300 lbs., will arrive at, and be offered on sale in Philadelphia ; it was raised by Mr. Tamm, a very extensive proprietor under his own eye and care, at the particular request of Mr. Hughes. The sale of *this parcel* will be duly notified, and both may be implicitly relied upon by our Farmers, as furnishing the best means of ascertaining the real value of this important Root crop.

A *small* quantity of the same kind, and far better than any we had before seen, was received by us from Mr. Hughes last Summer for *gratuitous* distribution, chiefly amongst his designated friends ; we fear that the unprecedented drought of the season may have disap pointed the expectations that were indulged from that present.—But the very commendable solicitude of our absent friend and fellow citizen, has placed ample means of a diffuse trial of this crop, with seed equally good, within the reach of every American Farmer, and we hope they will very generally embrace the present opportunity to form a just conclusion as to the quality and value of this agreeable and useful Root—of which *Mr. Hughes tells us*, " the true Swedish name is KOLROOT, but in consequence of its *enormous proportion*, in comparison with common turnips, it is called by the peasants in the province, where it is most cultivated, 'RUTA BAGA,' which means *Ram Root*, or *Ram* turnip."

HORTICULTURE.

POMARIUM BRITANNICUM,

An Historical and Botanical account of Fruits, known in Great Britain, by Henry Philips, —Second Edition.

(Continued from page 249.)

STRAWBERRY PLANT.—FRAGARIA.

In Botany, a Genus of the Icosandria Polygynia Class.

This most agreeable fruit does not appear to have been cultivated by the ancients; and it seems only to have grown in the mountainous parts of Greece and Italy, the climate being too warm in the other parts of these countries. It is slightly mentioned by Virgil, Ovid, and Pliny, and even the latter author does not mention the fruit as a diet or medicine. In speaking of the arbutus-tree, book 15, chap. 24, he says, "the tree is termed the strawberry-tree; and there is not any other tree that gives fruit which resembles the fruit of an herb growing by the ground." Again he says, speaking of the bramble-berry,—"as the ground strawberry differs in carnosity from the fruit of the arbutus-tree."

The red-wood strawberry is a native of this country; and several modern writers state, that the white strawberry, as well as the green strawberry, are indigenous to these kingdoms. The latter is often called the pine-apple strawberry, from its excellent flavour.

Gerard seems to consider only the red strawberry as a native of this climate. He says, "strawberries do grow upon hills and valleys, likewise in woods, and other such places that bee something shadowie. They prosper well in gardens: the red strawberry euery where; and the other two, white and green, more rare, and are not to be founde saue onely in gardens."

Shakespeare says:

"The strawberry grows underneath the nettle;
And wholesome berries thrive, and ripen best,
Neighbour'd by fruit of baser quality."

The scarlet strawberry is a native of Virginia, where it grows wild; and was brought to this country in 1629. It is the earliest sort, and is the best strawberry for forcing.

The hautboy-strawberry was procured also from America; from which we have raised the improved kind, called the globe-hautboy.

The Chili strawberry takes it's name from that part of America so called, from whence it was brought by M. Frazier, engineer to the French king. It was cultivated in the royal gardens at Paris, from whence some of the plants were conveyed to Holland, and from the latter place they were brought to England, by Mr. Miller, in the first year of the reign of King George the Second, 1727.

The Alpine strawberry is a native of Germany, and was planted in England in the year 1768.

The varieties of the strawberry have, like those of other fruits, been so increased, that, to describe them distinctly, would be almost impossible, even with the assistance of coloured drawings. The President of the Horticultural Society, Thomas Andrew Knight, Esq., states, that he has at this time not less than 400 varieties of this fruit in his garden. Among those which he has raised, is one from the white Chili strawberry and the pollen of the black strawberry.

Mr. Keen of Isleworth, in the county of Middlesex, who is one of the greatest growers of strawberries for the London market, has obligingly furnished me with his observations on the culture of this fruit, which furnishes a strong instance of the advantages of botanical knowledge. Mr. Keen states, that the want of education deprived him of the benefit of written information; but it will be found that he has studied the book of nature to advantage. I observed, says Mr. Keen, that some of my strawberry plants gave out abundance of male blossoms, but produced no fruit. I therefore, in the year 1809, had all these plants taken from my beds, and had other beds made with the fruit bearing, or female plants only; but finding my crop entirely fail, and suspecting the error I had made, I procured some blossoms of the male plants, which having put into a bottle of water, I placed on one of my beds, and in a few days perceived the fruit began to swell and thrive on on all the plants contiguous to the bottle.

Having tried the same experiment in several parts of my garden with the like effect, I was convinced of the necessity of the male plants in producing fruit, since which time, I have planted about one male plant to ten female plants, which I find to be the most profitable proportion, as my beds have since been so productive, that it has been scarce possible to gather the fruit without bruising others. Some strawberry plants have both male and female flowers on the same plant. These are not so profitable; and I find it more advantageous to raise my plants from seed than by suckers. When the fruit is quite ripe, I sow them in a rich moist soil, and in one year the Alpines produce fruit, but the other kinds require two years." From the seed, Mr. Keen has procured a new variety of this fruit, to which he has given the name of Imperial Strawberry; it is of a dark ruby colour, and, in appearance, the most beautiful of all the strawberries; but I find the flavour of it is not superior to that of other kinds. Mr. Keen recommends the month of March, as the best season for making new beds.

The strawberry is our earliest fruit, and, as the harbinger of the *fructus horæi*, its appearance is as welcome, as its flavour is agreeable.

I find that the old custom of putting clean straw round strawberry plants, is still continued in some parts of Suffolk. The late Sir J. Banks concludes, that their English name was derived from the practice of putting straw under them when the fruit began to swell, as the plant has no relation to straw in any other way; and no other European language applies the idea of straw in any other shape to the name of the berry, or to the plant. Sir Joseph adds, although the custom of putting straw round the plants is now very little attended to, it's utility is very evident, as in dry parching weather it would be the means of keeping the plants moist, and, in wet showery weather, it would both keep the fruit clean, and prevent its rotting so rapidly.

As a dietetic fruit, the strawberry affords but little nourishment; the moderate or even plentiful use of it is salubrious, and recommended to those of inflammatory or bilious habits. Boerhaave considers the continued use of this fruit, as one of the principal remedies in cases of obstruction and viscidity, and in putrid disorders. Hoffman furnishes instances of some obstinate diseases being cured by strawberries, and other mild sweet subacid fruits. Strawberries should be taken sparingly by those of a cold inactive disposition, where the vessels are lax, the circulation languid, or digestion weak.

This fruit is generally sent to dessert in its natural state, although often with cream and sugar; but it is more esteemed when Burgundy or claret wine is substituted for the cream. Strawberry jam is much admired; and for ice creams the flavour is generally preferred to that of raspberries.

The pine strawberries make an agreeable dessert wine, equally rich as mountain; but possessing greater fragrance and acidity; the latter quality is generally too predominant in our English made-wines, which proceeds more from the want of attention in the making of wines, than from the quality of the fruits.

In the monastery of Bathalla, in Portugal, is the tomb of Don John, son of King John the First, of Portugal; which is ornamented by the representation of strawberries, this prince having chosen them for his crest, to show his devotion to St. John the Baptist, who lived on fruits.

TAMARIND.—TAMARINDUS.

In Botany, of the Monadelphia Triandria Class, and not of the Triandria Monogynia, as classed by Linnæus. Natural Order, Lomentaceæ.

This name is derived from *tamar*, the Arabic name for the date; and it is to the Arabians that we owe a knowledge of the use of this fruit in medicine. The ancient Greeks knew nothing of it, and the first authors who prescribe the tamarind are Serapion, Mesue, and Avicenna.

The tamarind-tree is a native of both Indies, and thrives also in Egypt, Palestine, Arabia, and other parts of Asia; and it appears, by Johnson's edition of Gerard, to have been cultivated in England previous to 1633. Miller states, that he has had it grow upwards of three feet high in one summer, and produce flowers the same year it was sown; but this must have been accidental, for none of his older plants blossomed, although he had them twelve feet high, and eighteen years old. There is a fine healthy tree of this species now in the Royal Botanic Gardens at Kew, which flowered a few years back for the first time.

The tree grows to a great size, with large spreading branches, and a thick and beautiful foliage. The leaves are pinnate, composed of sixteen or eighteen pairs of leaflets, without a single one at the end: they are ovate-oblong, quite entire, smooth, sessile, of a bright green, spreading during the day, but closing, so as to lie over each other in the night; they have an acid taste. The flowers come out from the sides of the branches, on a long, upright, common peduncle, six or eight together, in loose bunches, of a yellow colour, veined with a reddish purple.

What we style the fruit of the tamarind is only the pistil of the flowers, which become pods, that are thick and compressed, from two to five inches in length, with from two to four or six seeds: these pods become of a reddish brown as they ripen. The fruit is, properly speaking, composed of two pods: the outer pod is fleshy, and the inner one thin as the finest parchment; between these two there is a space of about a quarter of an inch all the way, which is filled up with a soft pulpy substance, of a tart but agreeable taste, which is what we use as the fruit; this, and the stones which are enclosed in the inner pod, are fastened together by a great many slender fibres from the woody stalk which runs through the pod, and conveys the vinous juice, that afterwards hardens, into the viscous matter of the pulp. Lunan says, the tree is exceedingly common in Jamaica, where it grows to vast bulk; and he gives the following account of preparing the fruit. "The pods are gathered when full ripe, which is known by their fragility, or easy breaking on a small pressure between the finger and the thumb. The fruit is taken out of the pod, cleared from the shelly fragments, and placed in layers in a cask; and the boiling syrup from the teache, or first copper in the boiling-house, just before it begins to granulate, is poured in till the cask is filled: the syrup pervades every part quite to the bottom, and, when cool, the cask is headed for sale. The more elegant method is with sugar, well clarified with eggs, till a clear transparent syrup is formed, which gives the fruit a much pleasanter flavour.

The East-India tamarinds are preserved generally without sugar, and are better adapted for an ingredient in medical compositions. The best method of preserving them is said to be by putting alternate layers of tamarinds and powdered sugar in a stone jar: by this means the tamarinds preserve their colour and taste more agreeably.

In the Indies, and in some parts of Africa, tamarinds are used as food, and are made into a sort of confection with sugar, and eaten as a delicacy, which in the violent heats of these climates is cooling, and, at the same time, keeps the bowels in a proper state of laxity. The fruit is also frequently made an ingredient in punch, and seldom fails to open the body. A very agreeable cooling drink is made by simply mixing water with a few spoonfuls of it when preserved. Dr. Cullen was of opinion, that it was best to preserve tamarinds in the pods. They contain a larger proportion of acid, with saccharine matter, than is usually found in the acid dulcet fruits, and are therefore not only employed as a laxative, but also for abating thirst and heat in various inflammatory complaints, and for correcting putrid disorders, especially those of a bilious kind, in which the cathartic, antiseptic, and refrigerant qualities of the fruit have been found equally useful. When intended merely as a laxative, it may be of advantage to join them with manna, or purgatives of a sweet kind, by which their use is rendered safer and more effectual. Three drachms of the pulp are usually sufficient to open the body; but to prove moderately cathartic, one or two ounces are required. The leaves are sometimes used in sub-acid infusions; and Alpinus says, a decoction of them kills worms in children. (*Wright.*) Dr. Zimmerman prescribes tamarinds in putrid dysentery.

The sour taste of tamarinds proves that acid particles abound greatly in them, and a chemical analysis gives further proof of this. There is indeed no alkali to be obtained from this fruit, otherwise than by distilling it in a retort with quick-lime. A simple analysis of it yields no other principle but acid and sulphur.

It is not uncommon to find an essential salt crystalized on the branches of the tamarind-tree, which greatly resembles cream of tartar in all respects, and is no other than the genuine salt of the plant, formed by the sun's drying up the accidental extravasated juices.

The leaves of the sycamore, in hot seasons, are often found thus covered with crystals of essential salt, which is sweet, and very much of the nature of sugar. The lime-tree produces a like saccharine matter, which, being given to a person to drink, will be found of the same purgative virtue as manna.

Tamarinds are an ingredient in the well-known medicine called lenitive electuary.

WALNUT.—JUGLANS.

In Botany, a Genus of the Monœcia Polyandria Class.

The walnut-tree is evidently a native of the northern parts of Persia and China, where it grows wild; and the Grecian names for this fruit, Persicon and Basilicon, Persian or Royal Nut, bespeak it to have been brought from Persia, either by the monarchs of Greece themselves, or sent thither from the kings of Persia. According to Pliny's account, book 15, chap. 22, "the Greeks afterwards called them *caryon*, on account of the heaviness of the head which their strong smell caused."

"Walnuts were first brought into Italy by Vitellius, a little before the death of Tiberius the emperor; and the Romans," continues Pliny, "honoured them with the name of Juglandes, *viz.* Jupiter's nuts." They were much used at weddings by this people.

This author has written much on their medical virtues, book 23, chap. 18, wherein he says, that "the more walnuts one eats, with more ease will he drive worms out of his stomach; and that, eaten before meals, they lessen the effects of any poisonous food; eaten after onions," he states, "they keep them from rising, and prevent the disagreeable smell."

The bark of the walnut tree was considered a sovereign remedy for the ringworm. The leaves bruised and damped with vinegar, and so applied, put away the pain of the ears.

After Mithridates was vanquished, Cneius Pompeius found in his secret closet or cabinet, among many precious jewels, the receipt of a certain antidote against poison, written in the hand-writing of Mithridates, in his private note-book, as follows:—

"Take two dry walnut kernels, as many figs, of rue twenty leaves; stamp all these together into one mass, with a grain or corn of salt." Under which was written, "whoever accustoms himself to eat of this confection in a morning, next his heart there shall no poison hurt him that day."

Walnuts are considered stomachic: their oil is a good medicine for the stone and gravel. The bark of the tree is a strong emetic, either green, or dried and powdered. The unripe fruit is used in medicine for the destruction of worms, and is administered in the form of an extract. I find, if the water in which the outside covering of walnuts has been steeped, be thrown on the ground, the worms will immediately come out of the earth: anglers often use this means to obtain bait for fishing.

The ancients considered that walnuts chewed by a person fasting, would if applied, cure the bite of a mad dog.

The green nuts are cordial, alexipharmic, and said to be of great use in all contagious, malignant distempers, and the plague itself.

The nuts, preserved young, are an excellent sweetmeat, and are good to be eaten in a morning, in time of pestilential distempers, to prevent infection. I have been favoured by the following receipt for preserving young walnuts, by a family who assure me that they have known them succeed in obstinate costiveness when all other remedies have failed: even a small part of one of these sweetmeats will give relief.

Take green walnuts, in the proper state for pickling, and boil them till tender; take them out, and stick a piece of lemon-peel to every nut; and to every fifth one, a clove and a small piece of mace. To every pound of nuts, add one pound of moist sugar with water enough to make a good syrup; put in the nuts, and simmer them till the syrup is thick, and let them stand ten days; then clarify half the above quantity of sugar, and boil as before; and when cold, cover them close for use. By keeping, the syrup will shrink, so that after a year or two a little more syrup will be required to be added.

Gerard says, "the green and tender nuts, boyled in sugar, and eaten as suckarde, are a most pleasant and delectable meate, comfort the stomache, and expell poison."

The effluvia of walnut-trees is hurtful to the head, on which account it is not safe to sit uncovered beneath them, nor is it desirable to plant them too near dwelling-houses. Pliny says, "the oak will not thrive near the walnut-tree;" and Mr. Keen, who is so justly celebrated for growing of strawberries, informs me, that the walnut-tree is so injurious to strawberry beds, that they seldom bear fruit in the neighbourhood of that tree.

These trees require but little pruning; and they are often injured by cutting and lopping the branches while growing.

The largest plantation of walnut-trees in England, at the present time, is in the county of Surry.

Gerard says, "the walnut-tree groweth in fields neere common highwaies, in a fat and fruitful ground, and in orchards." It therefore appears to me, that it must have been introduced earlier than the date mentioned in the Hortus Kewensis (1562,) as this was only about thirty years before Gerard wrote his account, when these trees seem to have been very common in the fields.

The walnut-tree was formerly cultivated in England for the sake of the wood, which was in great esteem for cabinet goods, before mahogany and other curious woods were imported from America into this kingdom, which was about the beginning of the eighteenth century, when the use of mahogany was discovered by the following chance:—Dr. Gibbons, an eminent physician, was building a house in King Street, Covent Garden. His brother, who was a West-India captain, brought over some planks of this wood as ballast, which he thought might be of service in his brother's building; but the carpenters finding the wood too hard for their tools, it was laid aside as useless. Soon after, Mrs. Gibbons wanting a candle-box, the Doctor called on his cabinet-maker (Wollaston, in Long Acre) to make him one of some wood that lay in his garden. Wollaston also complained that it was too hard; but the Doctor insisted on having it done; and, when finished, it was so much liked, that the Doctor ordered a bureau to be made of the same wood, which was accordingly done: and the fine colour, polish, &c. were so pleasing, that he invited all his friends to see it. Among them was the Duchess of Buckingham. Her Grace begged some of the same wood of Dr. Gibbons, and employed Wollaston to make her a bureau also. On this the fame of mahogany and Mr. Wollaston was much raised; and furniture made of this wood became general.

The timber of the walnut-tree is much esteemed by coach-builders, and also for making gun-stocks.

WHORTLE-BERRY.—VACCINIUM:

Often called HURTS, or HURTLE-BERRY, and BILBERRY.

In Botany, a Genus of the Octandria Monogynia Class.

There are several varieties of this fruit, some of which are black, others red, and some white. The whortle shrub is a native of this country, and grows on most of our wild heathy commons and uncultivated hills: it is found in great abundance on Leith Hill, which is the most elevated part of Surry. The fruit seldom reaches the London market, although it is much admired by many people either in tarts or with cream. The berries are gathered by the children of the cottagers, and by them carried to the nearest market towns, and often in quantities that load several asses.

Gerard says, they formerly grew in Finchley Wood, near Highgate, and on Hampstead Heath. The red kind, which makes the fine purple dye, is found abundantly in several parts of Westmoreland, and the white whortle-berries principally in Lancashire; but most of our northern hills abound with some of the varieties. From their growing in high bleak situations, they are often called wind-berries.

I have never seen this shrub cultivated, although it is more ornamental than many foreign shrubs that are raised with great difficulty. The berry, which is a size larger than that of the juniper, is covered with a fine blue powder, similar to the bloom of our finest purple plums.

There is also, another species of heath-berry, growing on the mountainous parts of the northern counties, as well as in Scotland, on which the heathcocks and grouse feed.

There have been no less than fifteen varieties of the whortle-berry brought into this country from North America, between the years 1761 and 1769. *(Hortus Kewensis.)*

IMPROVEMENT OF HORSES.

Extract to the Editor, New York,
October 30th, 1822.

If possible, I will comply with your request of giving an article for the farmer touching our plans for the improvement of our breeds of horses; in the mean time, I enclose a copy of the articles and rules of the New York association for the improvement thereof. They are very imperfect, and will have revisal. The horse American Eclipse, you will see, as he will go to Washington to contend with the Champion of the South. He is from Gen. Coles' stud, and is an uncommon strong horse, though not in *my opinion* beautiful, excepting in his hinder quarters, which are uncommonly fine. His essentials are strength, and that hitherto has brought him off victorious. He can take a *longer run* at full speed, than any horse I have ever seen.

Articles and Rules of the New York Association, for the Improvement of the breed of Horses.

PREAMBLE.

The New York Association for the improvement of the breed of *horses*, considering that its objects will best be promoted by entering into a correspondence not only with similar institutions in the United States, but in foreign countries, for the purpose of collecting the most accurate information respecting that useful and noble animal, the Horse; considering also that the introduction, under the oversight and patronage of this Association, of Oriental and European horses and mares, of various breeds, will have a tendency to secure to our country improved stocks in all the various departments in which the services of this animal are required; considering, further, as much depends on the mode of rearing the horse, and the accuracy with which his pedigree is preserved, that honorary premiums or medals, granted by the Association, to such of its members as shall distinguish themselves by raising the finest specimens of this animal, will excite to laudable and generous emulation; and considering also that public races, periodically held, liberally supported, and prudently and firmly managed under the sanction of the Act of the Legislature, the strict regulations of the Association, and the steady countenance of its individual members, will go far towards accomplishing some of the important objects of the institution: It is therefore unanimously agreed, that the funds of this Association be placed in the hands of its Officers and managers, to be appropriated in such manner as they may deem best calculated to promote the objects and reputation of the institution, in conformity with the the following

ARTICLES OF ASSOCIATION:

Art. i. This Association shall be known by the name of the "New-York Association for the Improvement of the Breed of Horses.

Art. ii. The government of the Association shall be vested in a President, Vice-President, Secretary, Treasurer, and eleven Managers, who shall constitute a Board, and transact its business; five of their number shall form a quorum.

Art. iii. An annual election for officers and managers shall take place on the first Monday of June, in each year, and shall be by ballot of the members present.

Art. iv. An annual contribution of Ten Dollars, during the continuance of the Association, shall entitle any gentleman to become a member of the Association.

Art. v. The Officers and Board of Managers, in regular meeting convened, may, by a vote of two thirds of the members present, expel any member for improper conduct.

Art. vi. Any member may be permitted to withdraw from the Association, by giving notice to the Treasurer, or one of the Managers, on or before the annual election, and by paying his dues.

Art. vii. The Board shall, from time to time, as the funds of the Association may permit, introduce from abroad, such horses and mares as are best calculated to improve the breed of this animal, for the saddle, the harness, the turf, the road, and the field.

Art. viii. The Board shall have power to award premiums for the best specimens of the horse kind, raised in, or imported from abroad into the state of New-York, by a member of the Association.

Art. ix. All monies of the Association shall be placed in the hands of the treasurer, by whom the demands against the Association are to be paid, and who shall, at least once in each year, report to the Board the amount of receipts and expenditures, and the existing state of the funds.

Art. x. Trials of speed shall take place, under the snperintendence of the Association, twice in each year, in the months of May and October, under the subjoined Rules and Regulations.

Art. xi. A Record of the transactions of the Association, and a regular Racing Calendar and Turf Register, shall be kept by the Secretary.

Art. xii. These Articles of Association, and the subjoined Rules, are not to be altered, except at an annual meeting, or a special meeting of the members, convened by public notice, and by a vote of a majority of the members present.

RULES.

I. Every horse, &c. shall carry weight according to age, as follows:

An aged horse, . . .	126 lb.
Six years old, . . .	122 lb.
Five years old, . . .	116 lb.
Four years old, . . .	108 lb.
Three years old, ...	98 lb.
Mares, Fillies, & Geldings, allowed	3 lb.

II. No horse to carry more than five pounds over his stipulated weight, without the judges being informed of it.

III. No horse shall be permitted to start for any of the purses, unless entered by a member of the Society; and such horses as are to run, must be entered on the day preceding each race, or pay double entrance.

IV. Horses trained together in one stable, and owned by the same person, shall not be permitted to run at the same time for any purse at these races.

V. No combination or partnership will be permitted. If, therefore any horse shall win a purse, and it shall appear to the satisfaction of the judges, before the purse is paid, that such horse did run in partnership with any other horse, the purse shall go to the fair winner, and the combined horses shall be deemed distanced, and never be allowed to start again for any of the purses.

VI. If but one horse is entered for any purse, such one, by galloping over the Course two, three, or four times, according to the distance to be run, shall be entitled to the purse.

VII. Every horse must be ready to start precisely at the time mentioned in the advertisement of the race, and shall be allowed thirty minutes between each four-mile, three-mile, and two-mile, heat, for refreshment:

VIII. When running four-mile heats, a distance is . . . . . . 40 rods,
Three-mile heats, ... 30 rods,
Two-mile heats, ... 20 rods,

And when running heats under two miles, a distance shall be in the same proportion.

IX. Every horse that shall fail running on the outside of every pole, or whose rider shall cross, jostle or strike, or use any other foul play, or bring less than his stipulated weight to the scale, or alight without permission from one of the judges, shall be deemed distanced, and the next best horse declared winner.

X. Horses drawn before the race is decided, shall be deemed distanced.

XI. A horse must win two heats to be entitled to the purse, unless he distance all the others in one heat, in which case the winner shall not be obliged to start again; but, if three several horses win each a heat, then those three, and they only, are to run for a fourth heat, and such horses as are excluded by this rule from running for a fourth heat, shall be deemed distanced.

XII. In Sweepstakes, &c. of one heat, when two horses come in so near each other that it cannot be decided which is first, they two only must start again to determine which shall be the winner.

XIII. When running heats, if it cannot be decided which is first, they may all start again, except the dead heat be between two horses that if either had been winner the race would have been over, in which case they two only shall start again to decide which shall be entitled to the purse. Such horses as are prevented by this rule from starting again, must be deemed distanced.

XIV. If a rider accidentally fall from his horse, and the horse is rode in by any person of sufficient weight, he shall take place the same as if the accident had not happened, provided he goes back to the place where the rider fell.

XV. The winning horse the first or second day, shall be excluded from running on any other day.

XVI. All races shall be run with the left hand to the poles.

XVII. Riders must be dressed in complete jockey style.

XVIII. If any difference in opinion shall arise respecting the age of any horse, or respecting any race, such difference shall be decided by the judges for the day on which such difference shall take place.

The following additional Rules are to be observed by the Judges, in case of appeal to them by Bettors :

1st. All bets are understood to relate to the purse, if nothing is said to the contrary.

2d. When two horses are bet against each other for the purse, if each win a heat, and neither are distanced, they are equal ; if neither win a heat and neither are distanced, they are equal ; but if one win a heat and the other do not, the winner of the heat is best, unless he shall be distanced, in which case the other, if he save his distance, shall be considered best, and when both are distanced, they shall in all cases be deemed equal.

3d. When a bet is made upon a heat, the horse that comes first to the ending post is best, provided no circumstance shall cause him to be deemed distanced.

4th. A bet made upon purse or heat, is void if the horse betted on does not start.

AN ACT to amend an act entitled " An act to prevent horse-racing, and for other purposes," passed March the 19th, 1802.

Passed March 30, 1821.

I. *Be it enacted by the People of the State of New-York, represented in Senate and Assembly*, That from and after the passing of this act, the training, pacing, trotting, and running of horses, upon regulated courses, and upon private property, in the county of Queens, is hereby declared to be exempted and freed, for and during the period of five years from the passing of this act, from the provisions and penalties of the act entitled " An act to prevent horse-racing, and for other purposes."

II. *And be it further enacted*, That the said races or coursing shall only be allowed during the months of May and October in each and every year during said period.

III. *And be it further enacted*, That it shall hereby be made the duty of the sheriff of the county, or of his deputy, where such trials of speed shall take place, to attend and be present at such course or courses, to keep the peace upon the same, to remove from the same all gambling tables, shuffle-boards, or any other table at which money can be won or lost ; and that for his services in these respects, he shall receive a compensation not to exceed five dollars for each day's attendance, which sum of money shall be paid by the owner or owners of such horses as shall be entered upon such course or courses, for any of the purposes in the first section of this act mentioned: *Provided always*, That no such trotting, pacing, or running of horses shall take place in the county aforesaid, unless notice of the same shall have been previously given to the sheriff of the county ; and the person or persons who shall so trot, pace, or run his or their horses, without giving such notice as aforesaid, shall forfeit and pay one hundred dollars to the overseers of the poor of the town where such trotting, pacing, or running of horses shall have taken place, to be recovered by action of debt against the party or parties so offending.

New York, Oct. 20.

REPORT

Presented by his Honour the Mayor on the Discipline Mill at the Penitentiary.

On the 18th day of Feb. last, the Mayor had the honor of presenting to the Board a report recommending the erection of a Discipline Mill at the Penitentiary, and he has now the pleasure to inform them, that the necessary buildings and machinery were completed on the 7th day of Sept. last, and on the 23d of that month the Mill was put in full operation. The idea of attaching this species of labour to our penitentiary system, was first suggested to the present superintendant of our Alms House, by Mr. Isaac Collins, and Mr. Stephen Grellet, two gentlemen belonging to the Society of Friends in this city, who kindly furnished us with a report from the " Society for the improvement of Prison Discipline" in England, containing correct engravings of the buildings and machinery for the Mill, with a description of its operations and advantages, together with much other useful information on the subject.

Possessed of these lights and the talents and ingenuity of Mr. Benjamin Crooker, under whose direction the mill-work was constructed, no time was lost in commencing the establishment, and in its progress much less difficulty has been experienced than was anticipated.

The building is of stone, 30 feet by 60, and two stories high. That part occupied by the wheels, on which the prisoners work, is separated from the Mill by a strong stone wall, so that no communication is had with those who feed and tend the Mill, by those who perform the labor on the wheels. The building was originally intended for three wheels and three run of stones, but it is found by the experience already had, that the place is not sufficiently ventilated to admit a greater number of prisoners than can work on the two wheels now in operation. Each wheel is calculated to give employment to 32 prisoners, 16 on each wheel at once ; and a bell is so arranged as to strike every half minute, when one of the prisoners on the wheel comes off, and another goes on, by which each man works eight minutes, and rests the same space of time.

The average quantity of grain ground per day, is from 40 to 50 bushels, which it is presumed may be increased to 60 or 70, should it be found on further experience that the prisoners can be made to perform a severer task without injury to their health. The consumption of the Alms House, Bridewell and Penitentiary, is about 56 bushels of grain, ground into meal, per day ; the grinding of which has cost the public from 1600 to $2200 annually, averaging about 1900 dollars per year.—It will not be doubted, therefore, that a sufficiency of meal may be ground by additional exertion for the consumption of the whole establishment, and that in a manner free from expense to the public.

The cost of working the convicts out of the prison, including tools, barrows, carts, feed for the cattle employed, extra wear and tear of clothes, and pay to the keepers, has amounted to about $7,000 per annum. This sum, it is supposed by competent judges, would obtain through the medium of private contract, the performance of twice the labor executed by the prisoners.

If this be the fact, it is certainly one of much importance; for, if it cost the public one hundred dollars to perform a certain quantity of labor, which can be obtained by private contract for fifty, there ought to be some evidence of public utility, arising either from the punishment or reformation of the prisoners, to induce a continuation of the operation ; but nothing to justify even the belief of reformation has as yet shown itself, and the only reason which can be adduced in favor of a continuation of the system is, the want of proper employment for the prisoners.

There are always a numerous class of prisoners in the Penitentiary and Bridewell, consisting of female prostitutes and vagrants, for whom little or no employment could be provided ; but it has been found by late experience that the operation of women on the tread wheel, in proportion to their weight, is equally useful as that of the men—there is, then, this additional advantage arising from the erection of the mill, that this class of prisoners will now be made " to earn their bread by the sweat of their brow."

In carrying into effect our penitentiary system, much difficulty has always been experienced in finding suitable employment for the prisoners—but it is hoped that the introduction of the discipline mill, will in a great measure supply this deficiency ; and, that the effects of the labour performed will not only result to the advantage of the public, but the reformation and benefit of the convicts ; and in order that the result of this species of labor on those who have been in the performance of it may be ascertained, a register has been commenced of the time each person works on the mill, to be referred to in case of a re-committal, should any of them prove so incorrible as again to be guilty of any offence that will bring them once more to the test.

Should the advantages arising from this experiment be equal to the expectations of the Common Council, it is hoped that additional mills will be erected at the Penitentiary, and one at least at the Bridewell, in order that the time now employed by the prisoners in plotting mischief may be profitably disposed of. There is, however, one essential improvement in our penitentiary system, in addition to the mill, that appears to be absolutely necessary for the introduction of a proper discipline in our prisons, and that is the provision of a sufficient number of cells for solitary confinement, as retiring places for the prisoners after the labor of the day has been performed ; by which means they will have an opportunity for reflection, free from the baneful influence resulting from the present method of confining fifteen or twenty of them in a single room.—This subject however, will, no doubt, receive the attention it may appear to merit, after the Board shall have individually examined the operation of the mill, and the condition of the prisons and their inmates.

The appropriation authorised for erecting the Mill House and Machinery was $3000. The actual cost of the establishment however, was $3050. 9 cents, exceeding the sum appropriated, fifty dollars and nine cents.

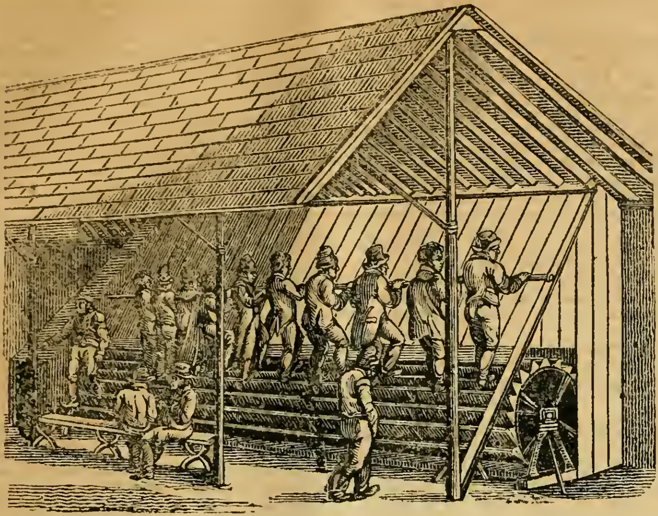
The prompt manner in which the Common Council have made the appropriation for carrying into effect this necessary establishment, and the attention paid to the construction of it by the Superintendent and Commissioners of the Alms House, cannot but meet with the approbation of their fellow citizens, particularly should the public good result, that has been so reasonably anticipated.

The prevalence of the calamity with which our City has been afflicted for the last three months, has prevented the presentation of this report until this time, and an earlier invitation to the Common Council to inspect the operations of the Mill, and the condition of the Bellevue establishment—it is now respectfully recommended that the Board will designate a day for that purpose.

In Common Council, Oct. 28, 1822.

Read, approved and directed to be published.

JACOB MORTON, Clk.



DESCRIPTION OF THE TREAD MILL,

Recommended by the Society for the Improvement of Prison Discipline.

The attention of the Society for the Improvement of Prison Discipline has long been devoted to the adoption of some plan for the effectual employment of prisoners. All attempts of this nature have heretofore been attended with considerable difficulty, but it is confidently anticipated that this invention will not only afford suitable employment, but act as a species of preventive punishment. Although but very recently introduced into practice, the effects of its discipline have in every instance proved highly useful in decreasing the number of commitments; as many prisoners have been known to declare that they would sooner undergo any species of fatigue, or suffer any deprivation, than return to the house of correction, when once released.

The annexed engraving exhibits a party of prisoners in the act of working one of the tread wheels of the Discipline Mill, invented by Mr. Cubitt, of Ipswich, and recently erected at the House of Correction for the county of Surrey, situated at Brixton. The view is taken from a corner of one of the ten airing yards of the prison, all of which radiate from the Governor's house in the centre, so that from the window of his room *he commands a complete view into all the yards.* A building behind the tread wheel shed is the mill house, containing the necessary machinery for grinding corn and dressing the flour, also rooms for storing it, &c. On the right side of this building a pipe passes up to the roof, on which is a large cast iron reservoir, capable of holding some thousand gallons of water, for the use of the prison. This reservoir is filled by means of forcing pump machinery below, connected with the principal axis which works the machinery of the mill; this axis or shaft passes under the pavement of the several yards, and working by means of universal joints, at every turn communicates with the tread wheel of each class.

The wheel, which is represented in the centre of the engraving, is exactly similar to a common water-wheel; the tread-boards upon its circumference are, however, of considerable length, so as to allow sufficient standing room for a row of from ten to twenty persons upon the wheel.*— Their weight, the first moving power of the machine, produces the greatest effect when applied upon the circumference of the wheel at or near the level of its axle; to secure, therefore, this mechanical advantage, a screen of boards is fixed up in an inclined position above the wheel, in order to prevent the prisoners from climbing or stepping up higher than the level required. A hand-rail is seen fixed upon this screen, by holding which they retain their upright position upon the revolving wheel; the nearest side of which is exposed to view in the plate, in order to represent its cylindrical form much more distinctly than could otherwise have been done. In the original, however, both sides are closely boarded up, so that the prisoners have no access to the interior of the wheel, and all risk of injury whatever is prevented.

By means of steps, the gang of prisoners ascend at one end, and when the requisite number range themselves upon the wheel, it commences its revolution. The effort, then, to every individual, is simply that of ascending an endless flight of steps, their combined weight acting upon every successive stepping-board, precisely as a stream of water upon the float boards of a water-wheel.

During this operation, each prisoner gradually advances from the end at which he mounted towards the opposite end of the wheel, from the last man, and having taken his turn, descends for rest (see plate) another prisoner immediately mounting as before to fill up the number required, without stopping the machine. The interval of rest may then be portioned to each man by regulating the number of those required to work the wheel with the whole number of the gang;—thus if twenty out of twenty-four are obliged to be upon the wheel, it will give to each man intervals of rest amounting to twelve minutes in every hour of labour. Again, by varying the number of men upon the wheel, or the work inside the mill, so as to increase or diminish its velocity, the degree of hard labour or exercise to the prisoner may also be regulated. At Brixton, the diameter of the wheel being five feet; and revolving twice in a minute, the space stepped over by each man is 2193 feet, or 731 yards per hour.

To provide regular and suitable employment for prisoners sentenced to hard labor, has been attended with considerable difficulty in many parts of the kingdom; the invention of the Discipline Mill has removed the difficulty, and it is confidently hoped, that as its advantages and effects become better known, the introduction of the mill will be universal in Houses of Correction. As a species of prison labour it is remarkable for its simplicity. It requires no previous instruction; no taskmaster is necessary to watch over the work of the prisoners; neither are materials or instruments put into their hands that are liable to waste or misapplication, or subject to wear and tear; the internal machinery of the mill, being inaccessible to the prisoners, is placed under the management of skilful and proper persons, one or two at most being required to attend a process which keeps in steady and constant employment from ten to two hundred or more prisoners at one and the same time, which can be suspended and renewed as often as the regulations of the prison render it necessary, and which imposes equality of labor on every individual employed, no one upon the wheel being able, in the least degree to avoid his proportion.

The arrangement of the wheels in the yards radiating from the Governor's central residence, places the prisoners thus employed under very good inspection, an object known to be of the utmost importance in prison management. At the Brixton House of Correction, with the exception of the very few confined by the casualties of sickness or debility, all the prisoners are steadily employed under the eye of the Governor during a considerable part of the day.

The *classification*, also, of the prisoners, according to offences, &c. may be adhered to in the adoption of these discipline wheels; the same wheel or the same connected shafts can be easily made to pass into distinct compartments, in which the several classes may work in separate parties. In the prison from which the annexed drawing is taken, a tread-wheel is erected in each of the six yards, by which the inconvenience and risk of removing a set of prisoners from one part of the prison to another is obviated.

As the mechanism of these Tread Mills is not of a complicated nature, the regular employment they afford is not likely to be frequently suspended for want of repairs to the machinery; and should the supply of corn, &c. at any time fall off, it is not necessary that the labour of the prisoner should be suspended, nor can they be aware of the circumstance; the supply of hard labour may therefore be considered as almost unfailing.

With regard to the expense of these machines, it may be observed, that although their original cost may, in some instances appear heavy, the subsequent advantage from their adoption, in point of economy, is by no means inconsiderable, and it is derived in a manner which must be most satisfactory to those who have the important charge and responsible control of these public establishments, viz. from the diminution in the number of persons committed. Such have been the results already experienced at those prisons where this species of corrective discipline is enforced. The saving to the county (in consequence of the reduction in the number of criminals) in the public charges for their apprehension, committal, conviction and maintenance, cannot but be considerable.

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* *The wheels erected at the House of Correction at Coldbath-fields, are each capable of containing forty or more prisoners, and the joint force of the prisoners is expended in giving motion to a regulating fly, which, by expanding itself in proportion to the power, will keep any number of men, from twenty to three hundred and twenty, at the same degree of hard labour.*

It is unnecessary to occupy much time in proving the advantage which the invention of the Stepping Mill presents as a species of *preventive punishment.* Although but very recently introduced, and hitherto but sparingly brought into action, the effects of its discipline have in every instance proved eminently useful in decreasing the number of commitments. As a corrective punishment, the discipline of the Stepping Mill has had a most salutary effect upon the prisoners, and is not likely to be easily forgotten ; while it is an occupation which by no means interferes with, nor is calculated to lessen the value of, those branches of prison regulation which provide for the moral and religious improvement of the criminal.

By a contrivance of machinery which we cannot here illustrate by a plate,

" When the machinery of the mill has attained its proper speed, certain balls rise by their centrifugal force, so as to draw a box below the reach of a bell handle, which will then cease to ring a bell, placed in some convenient situation for the purpose. But should the men at the wheels cease to keep up with the requisite speed in the mill work, the balls will descend, and a projecting pin on the box, striking the handle, placed in the proper situation for that purpose, will continue to ring the bell till they go on again properly ; and, by this means, a certain check will be kept on the labourers, and the governor or task master apprised, even at a distance, that the full work is not performed.

FOR THE AMERICAN FARMER.

CATTLE—*Description of the* HEREFORD, &c.

TO THE HON. HENRY CLAY.

Sir—I have just seen in the American Farmer, your letter of the 19th August, addressed to J. S. Skinner, Esq. respecting your English Cattle, and as I, some years since, was a breeder and feeder of the kind of stock you allude to, I take the liberty to offer a few remarks on your letter.

The description you give of your Cattle and their offspring, is quite sufficient to satisfy any person acquainted with this breed, that your's are of the thorough Herefordshire blood, but unless I saw them, or knew the names of their breeders, I would not undertake to say, they are of the best blood of that country, and indeed from the price your's cost in England, I have my doubts on this head—as I never knew the most celebrated breeders inclined to take so little money for their choice stock ; but times are much altered since I left England, and perhaps this may account for the depreciation in price.

Nearly all the cattle of Herefordshire are of the color you mention ; namely, the feet, belly, end of the tail, and face, white, and the rest of the animal a dark mahogany red—but some of the breeders, I may say, have private marks, such as a small piece of white on the top of the shoulders, others a red rim round the eyes.—It is wonderful to observe how they can obtain such peculiarities as they do in this respect, and they show what may be effected in breeding stock, by the man who is possessed of a steady perservering judgment. Indeed, it is this peculiarity in the character of the English yeomanry, and perhaps I may say nation, that renders their endeavours in almost every undertaking, ultimately successful, and their farming stock of almost every description unrivalled.

In order that you may have an opportunity of comparing your English stock with my view of what I consider the best blood of Herefordshire, I will just give you a description of the cattle I was in the habit of breeding and feeding in England ; which originally, I personally selected from the stock of the most celebrated breeders in that county, at a cost of sixty and one hundred and fifty guineas for two Bulls, and from thirty to forty guineas each, for heifers and cows.

I consider the most choice blood of the Herefordshire Cattle to be of the color described above, including the white on the top of the shoulder—Hide, thick, soft, and feels between the fingers like rich fat, covered with fine soft thickset hair, which occasions the skin to feel like a piece of fine thick rich velvet. Lips thin—nostrils, wide and full—eyes, bold and dark colored—eye sockets, prominent and wide apart—ears and face rather short—(which is the reverse of the Durham and other short horned cattle)—the tongue roots rather full—no loose dulap—bosom, not very prominent but wide—belly or paunch, very small and much drawn upwards—horns, yellow white, turning upwards, rather long, very smooth, bright, free from wrinkles, and fine, not resting *on*, but growing *out* of the head—Neck thin and fine—chine, thin when lean, well joined to the loin; when fat, very broad, and particularly full at the sides, the shoulders fitting it equally nice as in the blood horse, without any projection of the elbow—ribs, not hanging from, but rising out of the back, very wide—and when the animal is fat, I have seen the flesh on them three inches higher than the back bone, which was ascertained by laying a stick in various places across the back, and running a three inch rule along the centre of the back, from behind the hips to the centre of the chine, without touching the stick—short ribs, at the side of the loin, very projecting and thick at the ends with fat—hips, projecting, remarkably large and fat, and when the hand is placed on them, feel like the back of a man's head, and a very fat head too—rump, remarkably long and full of fine flesh ; indeed it is here and in the loin and chine that the Herefords principally excel, which occasions those parts to sell in London, to the Beef-steak houses at full double the price of those from many other kinds of cattle—Twist, or where the hind legs unite, very low and full, the outside of the thigh, flat, and free from flesh, which occasions the round to be nearly free from coarse, and full of fine meat—flank, full and driving forward when the animal is walking.

The peculiarities of the Herefordshire cattle are, the color, horns turning upwards, long and smooth—lightness of offal, length of rump, size and fatness of the hips; every part where gentlemen usually eat, remarkably full of fine fat beef, while those parts usually eaten by plebeians are very scanty, which occasions these cattle to be much sought after by butchers, who supply gentlemen's families with beef.

With respect to size, these animals are so disposed to fatten, that by good management they attain a weight equal to any cattle in England, not excepting the Holderness and Durham, but when low in flesh, they appear small, from their bones being so remarkably light, and the paunch so very small and drawing upward.

As milkers, they are, perhaps, equal to any of the distinguished feeders—but here a distinction must be made, as none of the famed beef cattle are good for milk ; indeed we ought not to expect it, it is too much like blowing hot and blowing cold with the same breath.

For working, they perhaps surpass any other breed in England, unless the North Devonshire cattle can be considered as equal to them—but every good property being taken into consideration, I prefer the Herefordshire cattle to any other breed in England ; these, and the North Devons, always sell at a higher price, according to their weight in London, than any other cattle, unless the Fifeshire and Kyloe Scotch Cattle can dispute the palm with them ; indeed these four breeds nearly supply with beef all the first families in the kingdom, and may be considered amongst cattle, what the Barb and the Arabian are amongst horses.

There are to be found of course in Herefordshire, cattle of various qualities, according to the judgment of those persons who undertake to breed them, but generally speaking, they are good workers, good feeders, make excellent beef, and are first rate *handlers*; but the latter good property appears to be of little value in the United States, although the English Grazier, in selecting cattle or sheep, depends more on his fingers than his eyes. Should these observations furnish you or any of the readers of the American Farmer, with information that may in any manner assist the cause of agriculture, I shall be well pleased : and, that you may rise pre-eminent as a farmer and grazier, as you so justly have done as a Senator, is the wish of ALBION.

Near Washington City,
30th Oct. 1822.

STEAM LAND CARRIAGES.

The Monthly Magazine, September 1, contains the engraving and description of Griffith's Patent Land Carriage, for conveying goods and passengers on public roads without the aid of horses.—The Carriage there represented and described will be worked by an engine of seven horse power,—and will transport a load of six tons at an average rate of five miles an hour, which may be varied and increased indefinitely for other Carriages.—The general introduction of these carriages for all kinds of purposes, will constitute a triumph of mechanics never anticipated by our ancestors.

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American Enterprise.—General M'Clure, of Steuben, N. Y. has betted $50, that he would take wool from the fleece, and manufacture satinet sufficient for a suit of clothes and have them made up, in ten hours. The colour to be a blue mixture. The wool was colored in 35 minutes ; carded, spun and wove in two hours and 25 minutes; fulled, knapped, dryed, sheared, and dressed in 1 hour and 59 minutes ; carried in 4 minutes 3-4 of a mile to Mr. Gillmore's tailor shop, who with the assistance of 7 hands completed the coat, jacket and overalls in 3 hours and 49 minutes ; there was 1-2 yard of the cloth left, being in the whole 8 1-2 yards, and of such quality as was estimated to be worth one dollar per yard. So that he completed the enterprise in eight hours and 45 minutes. He has since offered to bet $100, that he can manufacture a better suit in eight hours.

◆

Saratoga Show and Fair.—On Wednesday se'nnight the annual show and fair was held in Saratoga county, when the usual exhibition of cattle, domestic manufactures, &c. and a ploughing match took place, in which 19 competitors contended for the prize. The specimen of woollen and linen cloths, carpeting, flannels, plaid, &c.

were numerous; and a gipsy bonnet, made by Miss Nancy Bradly, obtained a regular and an extra premium, and was purchased by J. K. Beekman, Esq. of this city, for 25 dollars, and is said to be equal in quality to imported Leghorn No. 58, which sells for 60 to 70 dollars.

The Cattle Show at Rutland, Vt. is stated to have been quite splendid. There were at the show 125 yoke of working oxen, which were connected so as to form one team.

We have noticed in the papers a great variety of extraordinary productions of the season, such as pears, apples, squashes, &c. which indicate that the present year is prolific in great things. But the following, we venture to say, will match any thing that has been noticed this season—the truth of which is beyond question:—Mr. Thomas Davis, of this town, raised in his garden a blood beet, which measured *thirty inches* in length—*twenty four inches* girth, and weighed SIXTEEN POUNDS and fourteen ounces; and has several more in his garden which he thinks may equal if not exceed this.—*Salem Paper.*

Easy method of breaking Glass in any required direction.—Dip a piece of worsted thread in spirits of turpentine, wrap it round the glass in the direction that you require it to be broken, and then set fire to the thread, or apply a red hot wire round the glass, and if it does not immediately crack, throw cold water on it while the wire remains hot. By this means glass that is broken may often be fashioned, and rendered useful for a variety of purposes.

From the New Monthly Magazine.

THE MILK-MAID AND THE BANKER.

A Milk-Maid with a very pretty face,
Who lived at Acton,
Had a black Cow, the ugliest in the place,
A crooked-back'd one,
A beast as dangerous too, as she was frightful,
Vicious and spiteful.
And so confirmed a truant, that she bounded
Over the hedges daily, and got pounded.

'Twas all in vain to tie her with a tether,
For then both cord and cow elop'd together.
Arm'd with an oaken bough (what folly!
It should have been of birch, or thorn, or holly,)
Patty one day was driving home the beast,
Which had as usual slipp'd its anchor,
When on the road she met a certain banker,
Who stopp'd to give his eyes a feast
By gazing on her features, crimson'd high
By a long cow-chase in July.

"Are you from Acton, pretty lass?" he cried:
"Yes," with a curtsey, she replied,
"Why then you know the laundress, Sally Wrench?"
"She is my cousin, sir, and next door neighbour."
"That's lucky, I've a message for the wench,
"Which needs despatch, and you may save my labour,
"Give her this kiss, my dear, and say I sent it,
"But mind, you owe me one—I've only lent it."

"She shall know," cried the girl, as she brandish'd her bough,
"Of the loving intentions you bore me,
"But as to the kiss, as there's haste, you'll allow
"That you had better run forward, and give it my Cow,
"For she, at the rate she is scampering now,
"Will reach Acton some minutes before me."

THE FARMER'S CREED.

Let this be held the Farmer's creed,
For stock, seek out the choicest breed;
In peace and plenty let them feed;
Your land sow with the best of seed;
Let it not dung nor dressing need;
Inclose, plough, reap with care and speed,
And you will soon be rich indeed.

Editorial Correspondence.

TO THE EDITOR OF THE AMERICAN FARMER.

REMARKS ON THE COMMUNICATION SIGNED GIDEON DAVIS.

As I know that your valuable paper is devoted to subjects of general interest to the agricultural community, it is with reluctance, I have to request the favour of you to publish a few words on the subject of Gideon Davis' commentaries; as they contain mistatements, which are evidently calculated to injure me. I trust you will for this time, dispense with a good general rule, to do an act of justice; it appears that while Mr. Davis was zealous to counteract the effects of alleged mistakes, in the highly respectable committee on implements, ploughing, &c. so far as they concerned himself, he was regardless of what might be the injurious consequences, to others, of his own mistakes; as I wish to be as concise as possible, I shall pass over several of his mistatements, as the influence of most of them is destroyed by the able reply of Com. Porter. He, however, has made himself responsible for one capital mistake, in his assertion, that my ploughshare and coulter were laid with steel. I have it fully in my power to prove, that there was not a particle of steel on either, and how *he "could make this mistake, is for him to say, or others to judge, and not for me—for I don't know."* As to their being "ground smooth," the plough had been tried in hard and gravelly ground, (a situation in which Mr. Davis, I presume, is not fond of exhibiting his ploughs)—when they had been battered and gapped, it was thought less expensive to grind them than to send them to the blacksmith's. Now, Sir, if you please, one word as to *fashion*, though I am quite surprised, that he should so far deviate from the regimen of his society, as to become a *stickler for fashion!* 'Tis true my plough is old fashioned; and to its credit, be it spoken, it has withstood the test of long tried experiment, in a neighbourhood too, where almost every *new fashioned plough* has been tried, and thrown aside, as not answering the purpose of the practical farmer; were the question asked, where are the numerous ploughs introduced here from Pennsylvania, Virginia, and elsewhere? the *wooden stocked*, *the all iron*, and for aught I know, half a dozen other fashions of this same Mr. Davis, attempted by newspaper puffs, and otherwise, to be brought into general use? I say if this question was asked, in a district of country which can boast of more good ploughing, perhaps than any other of equal extent in the middle states, the answer would be *among the useless lumber of the farmer!* In conclusion, when the merits of my ploughs fail to recommend them, without the aid of detracting from the just merits of others, Gideon Davis, and all others, may save themselves the trouble of all unfair attempts to condemn them, as I shall willingly adopt a better *fashion*, or turn my hand to some other honest employment for the support of my family.

Your's, respectfully,
WILLIAM BROWN.

Oct. 17, 1822.

LEICESTER SHEEP—VICUNA, *a Peruvian Sheep*—CAPE-SHEEP.

We publish the following letter received by us from a very respectable farmer, as the bet mode of accomplishing its chief object; ous readers will thus be apprized that he has several fine Rams of the Leicester breed of sheep for sale.

We also give it a place to record one of many instances which prove the willingness of our most eminent merchants, to advance *the great* interest of this Nation, by importing animals of approved breeds from all countries; bringing them from the east and from the west, and giving them to our industrious and successful farmers. The happiest effects will flow from such enterprize and liberality, concluded as in this instance by the exercise of a sound discretion, in the selection of practical Farmers to pursue the experiment. It speaks a language that should be understood; it offers an example that should be imitated; and it displays feelings which excite our admiration and deserve applause. May the givers of such gifts continue to enjoy the prosperity which justifies them, and add to their own, whilst they contribute to their country's welfare.—*Edit Am. Far.*

Darby, Delaware Co. Penn.
September 29th, 1822.

Dear Sir,

If there should be any application to you for Dishley sheep, I should be obliged by your bearing my flock in mind. I think I may truly say that I have some of the best formed young rams that I have ever seen; and I would like to dispose of some of them. My friend, Mr. Louis Clapier, intended to have given me a pair of Vicunas, which he ordered from Peru, but unfortunately the female died on the passage. I have the male at my farm, and consider him a beautiful animal. I hope that I shall be able to get him a companion yet, by some means.

Mr. Clapier has also just presented me with a pair of Cape-sheep, which resemble the Barbary or Tunisian sheep, but I do not think them so good; they are not so large, and their wool is much coarser; they are sprightly pretty looking animals, and I expect they will improve.

I hope to have the pleasure of being present at your next Cattle Show.

AARON CLEMENT.

J. S. Skinner, Esq.

THRESHING MACHINE.

Extract to the Editor, dated Wilkesbarre, Pa. 9th August, 1822.

My Dear Sir—In No. 19, page 152, of your Journal, notice is taken of a Threshing Machine, invented by a Mr. Pope, of Hallowell, in Maine, and another still more efficient by a Mr. Seth Ballow, of Livermore. As I am desirous of learning full particulars of both these machines, I request the favour of your giving me such information as you may possess concerning them, so as to enable me to obtain the neccessary particulars by application through the proper channels, which at present I do not know.

Very truly your's,
CHAS. STREATER.

J. S. Skinner, Esq.

We have it in our power to confirm the reported efficiency of Mr. Ballow's Threshing Machine, which we do by the following letter and certificate recently received from Virginia; but we have a much esteemed correspondent at Hallowell, Me. who will greatly oblige us by calling the attention of Mr. Pope and Mr. Ballow to the wishes of our Pennsylvania friend; who, if they please, will be gratified by the publication in this Journal, of a description of their respective inventions, their prices and efficiency.

Edit. Am. Farm.

Oak Hill, Sep. 20th, 1822.

J. S. Skinner, Esq.

Dear Sir,

Permit me, Sir, to mention a threshing machine, which was invented by Seth Ballow, of Maine, and lately brought here by two gentlemen of the state of Maine.

"Copy of a certificate obtained upon the machine being viewed in operation.

"The undersigned have seen a wheat machine in operation, now in the possession of Major Swett and Pumpilly, for which Seth Ballow obtained a patent, and are of opinion that it is a valuable improvement on any thing of the kind we have ever met with.—It is more simple in its construction, upon a cheaper plan, and better adapted to the purpose of Farmers in general, inasmuch as it is within the means of those of small capital as well as large. From the experiment made in our presence, we farther certify that, it separates the grain from the straw more effectually than even the ordinary mode of threshing.

J. Bayley,
W. Ellgey,
Ariss Buckner,
Charles Lewis,
Robert Bayley,
Samuel Halley,
W. Beveridge,
Jacob Ish,
R. H. Little,
Geo. B. Whiting,
W. J. Weldon,
Edmund Tyler,
Francis Strebling.

A thorough conviction that this machine will be of great importance to the agricultural interest of our country, induces me to trouble you upon the subject. My impression is that, the machine is fully competent to thresh 100 bushels per day, with three hands and one horse, and may be enlarged so as to do 150 bushels per day, with great ease to two horses and four hands.

I remain sir,
With sentiments of respect, &c.
WILLIAM BENTON.

President Monroe's Farm,
Loudoun County Va.

TO THE EDITOR OF THE AMERICAN FARMER.

Snowhill, August 20th, 1822.

Sir—I send you a sample of Grass that grows on a piece of wet ground, in this neighbourhood. It grows from four to six feet long, and is nearly of one size, from one end to the other. I wish you would make inquiry through your paper, if there is any like it in the United States, as there is none, as far as I can learn, in this county; nor any where that I have travelled. I think you will see that it is capable of being worked into Hats or Bonnets, which it has been in this neighbourhood, and the durability is equal to any Leghorn. This grass has no joint; it falls on the ground and attaches itself in the manner of a vine, at every 3, 4, 5, or 6 feet. I think I could save a ton annually. I will send a sample to the proprietor of any Bonnet Factory that may request it. Your attention will be acknowledged by your humble servant,

THOS. R. P. SPENCE.

We have received the specimen and finding it very brittle, we should have feared that, it could not be usefully employed in manufactures; if our very respectable friend had not stated the fact, that Bonnets and Hats made thereof, had equalled the Leghorn in durability. This specimen very probably owed some portion of its brittleness to the maturity of its growth. If there is really nothing to be feared on this score, not only Bonnets and Hats, but Floor Mats or Cloths, we suppose, may advantageously be made of it.

Editor Am. Farmer.

TO THE EDITOR OF THE AMERICAN FARMER.

WHEAT OF A SINGULAR KIND.

Near Concord, Sussex Co. Del.
24th June, 1822.

Sir—I herewith send you a small sample of a very curious kind of wheat heretofore unknown in this neighbourhood, and obtained in the following manner:—About seven years past I sowed an equal quantity of what we here call the blue straw, a smooth wheat, and the red chaff bearded, with a view of ascertaining which kind would prevail; or if a distinct kind would ultimately grow from them. The produce of this was sown for about three years; afterwards, it was perceived that some ten or a dozen heads of an entire distinct kind grew out of it; which were since sown three years successively, and now the present crop of this seed exhibits a variety of distinct kinds, two of which I have selected by cutting out the heads carefully from the rest. The one a bearded, selected for the length of head and beautiful colour of straw, and ripenning somewhat sooner. The other kind, which I send you, is entirely of a different sort, of which myself or neighbours have never before seen a sample. Should you have had an opportunity of knowing any thing of such an Agricultural Phenomenon, an account of the circumstances would be peculiarly acceptable to

Your most obedient,
JOHN RUST.

We hope to get some additional particulars relative to this wheat, from a friend in Queen Anne's county, Md. who, we understand, has noted several interesting facts, and made some experiments respecting it.—*Edit. Am. Farm.*

ERRATA, NO. 25, VOL. IV.

Easton, Oct. 24, 1822.

Dear Sir,—In the 25th Number, Volume IV. of the "American Farmer," you republished an article on the remarkable salubrity of a small neighbourhood of this county, as evinced by the great longevity of its inhabitants, with the best intentions we cannot doubt—but your compositor has made a terrible error, which, I have no doubt, you will have immediately corrected. We intended to describe a small tract of ten miles in diameter, more than half of which is covered with water, and of course unoccupied by man—and we mentioned it, as extending five miles to a well known oak tree, as its centre. This little *five*, your compositor has, no doubt very innocently, converted into *fifty*, spreading our little record list of antients over a territory of *one hundred miles* square, a surface considerably larger than the whole Eastern Shore, or Eastern division of the State of Maryland. Respectfully, yours, &c. &c.

A. GRAHAM.

J. S. Skinner, Esq.

CORN CROP.

Cæcil Co., Maryland,
September 26th, 1822.

John S. Skinner, Esq.

Dear Sir—"The farmers in this county have taken the fodder from their corn, and can now judge more particularly and exactly what they will make—and after all our fears about the drought, there will be more corn than was anticipated, and indeed more than an average crop—more than has been made in this county for many years; and I hope that other sections of the country may be as agreeably disappointed.

Your Friend,
B. F. M.

THE FARMER.

BALTIMORE, FRIDAY, NOVEMBER 8, 1822.

☞ The Editorial remarks in No. 8, of this volume, relative to the condition of some manuscript communications, had no reference or allusion to any writer in that number.

☞ According in opinion with the Editors of the American, in the two following items, we adopt them to save us time in doing what we could not do better. Both the subjects referred to, come under the head

INTERNAL & PUBLIC IMPROVEMENTS.

The Tread Mill, which for its beneficial effects on crimnals and vagrants, has been adopted in most of the prisons and work-houses of England, has recently become an appendage to the Penitentiary of New York. The report to the Corporation of that city, *see page* 260, is an additional testimony in its favour; and we have no doubt that the erection of a similar establishment in connection with the Maryland Penitentiary, would be found productive of equally good results.

American Atlas.—Want of opportunity has, until now, prevented us from examining the *American Atlas*, recently published in Philadelphia, by Messrs. Carey and Lea. We find this work is on the plan of the celebrated atlas of Le Sage—and combines in the clearest and most happy manner the history, chronology and geography of North and South America, and the West Indies. It also exhibits an accurate account of the discovery, settlement and progress of their various kingdoms, states, provinces, &c. together with the wars, celebrated battles and remarkable events, to the year 1822. The more closely we inspect this publication, the more deservedly do we think it entitled to the appellation of a *great national work*. The undertaking of the publishers was one of no ordinary magnitude, responsibility and cost; and the able and satisfactory manner in which it has been accomplished, entitles them to the warmest thanks and patronage of the American public. When the very extensive range of matter comprehended in this work is considered, it can scarcely fail to excite surprise that, it has been executed with such general fidelity and correctness. To the statesman, the politician, the student and citizens of every calling, it will prove a valuable acquisition, an agreeable study, and afford a ready reference to any of the various matters contained in its pages.

* * *

PRICES CURRENT.—CORRECTED WEEKLY.

White wheat, $1 30 to 1 35—Red do., $1 18 to 1 25—Rye, 70 to 75 cts.—Corn, 62 to 65 cts.—Oats, 35 to 37½ cts.—Beans, $1 25 to 1 37½—Peas, black eyed, 65 to 70 cts.—Clover seed, $9—Whiskey, 35 to 36 cts.—Apple brandy, 30 to 32 cts.—Peach do., 70 to 75 cts.—Herrings, No. 1, $3 62½—No. 2, $3 37½—Shad, trimmed, $8.

Maryland Tobacco continues very dull—prices have not varied for several weeks past.

PUBLISHED BY JOHN S. SKINNER.

ARBORICULTURE.

POMARIUM BRITANNICUM,

An Historical and Botanical account of Fruits, known in Great Britain, by Henry Philips, —Second Edition.

(Continued from page 255, and concluded.)

THE FRUIT OF THE LOTUS-TREE OF THE ANCIENTS.

Has been made so interesting to us, by the inimitable pens of Homer and Ovid, as well as the mention made of it by Herodotus, Strabo, Pliny, and other authors of antiquity, that I am induced to give their accounts of this celebrated fruit; although it is now either entirely lost, or so much degenerated, as not to be known by their descriptions.

Some authors suppose it to have been a fabulous fruit, and only to be found in the poet's imagination. This idea is absurd. Ovid has described it as particularly, or more so, than any other fruit mentioned in his Metamorphoses.

The Lotus-tree was evidently a native of Africa; and in all probability was improved, by being cultivated on the sands of the coast, where, not being indigenous, it has been lost from the neglect of the inhabitants, during the revolutions which that part of the world has undergone. If this fruit has not already been discovered under some other appellation, we may still expect that our researches in the interior of Africa will restore the lost treasure. It is now about 2700 years since Homer related the enchanting effects this fruit had on the followers of Ulysses:

Nine days our fleet th' uncertain tempest bore,
Far in wide ocean, and from sight of shore;
The tenth we touch'd, by various errors tost,
The land of Lotus and the flowery coast.
We climb'd the beach, and springs of water found,
Then spread our hasty banquet on the ground.
Three men were sent, deputed from the crew,
(An herald one) the dubious coast to view,
And learn what habitants possess the place.
They went, and found a hospitable race;
Not prone to ill, nor strange to foreign guest.
They eat, they drink, and nature gives the feast;
The trees around them all their fruit produce,
Lotos the name, divine, nectareous juice!
(Thence called Lotophagi,) which whoso tastes,
Insatiate riots in the sweet repasts,
Nor other home, nor other care intends,
But quits his house, his country, and his friends:
The three we sent from off th' enchanting ground
We dragg'd reluctant, and by force we bound;
The rest in haste forsook the pleasing shore,
Or, the charm tasted, had return'd no more.
Hom. Odyss.

From Ovid's elegant fable of Dryope, we learn from whence this tree is supposed to have derived its name.

Not distant far a wat'ry lotus grows;
The spring was new, and all the verdant boughs,
Adorn'd with blossoms, promis'd fruits that vie,
In glowing colours with the Tyrian dye.

* * * * * * * *

Upon the tree I cast a frightful look,
The trembling tree with sudden horror shook.
Lotis the nymph (if rural tales be true,)
As from Priapus' lawless lust she flew,
Forsook her form; and fixing, there became
A flow'ry plant, which still preserves her name.

Theophrastus mentions the lotus fruit in his 4th book, where he says, that it is of the size of a bean, and changes it's colour as it ripens. This author affirms, that the tree is by its nature everlasting.

Strabo, in his 17th book, informs us, that Syrtis as well as Menynx was said to be Lotophagitis. The compass of the gulph, says this geographer, where the lotus grows, is almost 1600 furlongs; the breadth of the mouth 600: by the capes there are islands near to the main land. It is thought, continues he, that Menynx was the country of the Lotophagi, or those that feed on the lotus-trees, of which country Homer makes mention; and there are certain monuments seen, and Ulysses's altar, as well as abundance of lote-trees, the fruit of which is exceedingly sweet.

Pliny has furnished us with an account of the lotus-tree, in his 13th book, c. 17. According to this author, the finest trees of this kind grew on two large sand banks on the Mediterranean coast of Africa, not far from Leptis and Carthage. He mentions them as being the size of pear-trees, but states that Nepos Cornelius described them as shrubs. The leaves, says Pliny, are thick, cut, and indented: otherwise they are like those of the ilex or holm-tree. There are many varieties of this fruit, but he describes the generality of them as being the size of a bean, and of the colour of saffron, yet, says he, before it is quite ripe the fruit changes into a variety of colours like grapes. It grows thick among the branches of the tree, in the manner of myrtle-berries, and not, says he, like cherries. This fruit in Africa, continues Pliny, is so sweet and pleasant, that it has given the name both to a nation and country, as the people are called Lotophagi; and so welcome are all strangers there, and so well contented with their entertainment, that they forget their own native soil, for the love they have for this fruit, when once they have taken to it. By report, (adds this author,) those who eat of it, are free from all diseases of the stomach.

Those lotuses were accounted the best that had no kernels within; for there is a kind, says Pliny, that has a kernel as hard as a bone. From this fruit was pressed a wine similar to mead, which he states, on the authority of Nepos, would not keep above ten days. The Lotophagi pressed the berries of this fruit, with wheat or frumenty, into a paste; and so put it up in great barrels or vessels for food. We have heard, says Pliny, that whole armies passing to and fro through Africa had fed upon it, having no other food.

The wood of the lotus-tree, according to the account of Pliny, was of a black colour, and was, says he, much sought after for making musical pipes. Shafts of daggers and knives, &c. were made of the roots. This author says, "it is growing in Italy, but with the change of soil it has changed it's nature;" but in his 16*th* book, chap. 30*th*, he says, "the lotus-tree is planted about the finest houses in the court-yards, because the boughs spread so large. Although the body is short and small, it affords much shade; yet there is not a tree that gives shade for so short a time, as the leaves fall at the approach of winter, when it admits the sun." The bark is described as of a pleasing hue, and was used to colour skins and leather; the root to dye wool.

"The fruit," says he, "resembles the snouts or muzzles of wild beasts, and many of the smaller berries seem to hang to those that are larger."

The same author, in writing on the age of trees, (book 16*th*, chap. 24*th*,) says, "at Rome, in the court-yard belonging to the chapel of the goddess Diana Lucina, there is yet to be seen a lote-tree standing before the chapel, which was built in the year of the Anarchy, when Rome was desolate of all magistrates, which was 369 years after the foundation of the city; but how much more ancient this tree is than the chapel, God knows! for older it is without all question, as from trees there growing, which the Latins call *Lucus*, the goddess Diana took her name Lucina, which was about 450 years back, and doubtless this tree is so old."

"Another lote-tree there is," says he, "still older, but the age of it is likewise uncertain: it is known by the name of *Capillata* (hairy,) and so called, because the hair of the vestal virgins' heads is usually brought thither to be consecrated. There is a third lotus at Rome, in the court-yard and cloister about the temple of Vulcan, which Romulus built for a perpetual monument and memorial of a victory, and defrayed the charge out of the tenth of the pillage and spoil that he obtained from his enemies; and this tree is at least as old as the city of Rome."

Pliny writes on the medicinal qualities of the lotus, in his 24*th* book, chap. 2*d*, and says his countrymen called it the Greek bean. He says the fruit is sweet, but that nothing is more bitter than the shavings of the wood.

Mr. Mungo Park discovered what is supposed to be the lotus of the ancients, and says it abounds in all parts of the interior of Africa. Agreeable to his account, it is rather a thorny shrub than a tree. The fruit is a small farinaceus berry, which being pounded and dried in the sun, is made into excellent cakes, resembling in flavour and colour the sweetest gingerbread. This traveller observes, that a sweet liquor is obtained from the lotus, which, we may conclude, had the bewitching qualities described by the ancients.

A species of the lotus, or nettle-tree, *celtis*, has long been cultivated in this country: as Gerard says, "this is a rare and strange tree in both the Germanies: it was brought out of Italy, where there is found store thereof, as Mathiolus testifieth; I have," says he, "a small tree in my garden: there is likewise a tree thereof in the garden under London-wall, sometime belonging to M. Gray, an apothecary of London, and another great tree in the garden neere Coleman streete, being the garden of the queen's apothecary, called Mr. Hugh Morgan, a curious coseruer of rare simples. The lote-tree doth also grow in Affricke, but it some what differeth from the Italian lote in fruit." Gerard adds, that the fruit ripens in September: the berries, he says, are round, and hang on stalks like cherries, and not like the African lotus. "They are," says he, "of a yellowish white colour at the first, and afterwards red, but when they be ripe they be somewhat blacke."

The lotus-flower, that is now become so fashionable in ornamenting furniture, from the circumstance of it's having been selected as the decoration of the superb Chinese chandeliers made for his Majesty's Pavilion at Brighton, is not the blossom of the lotus-tree, but of the *Nymphæa Nelumbo*, or Chinese water-lotus. This water-lily is called *Nymphæa*, from it's growing in the water, which the poets feign to be the residence of the Nymphs. In China, where it was always held in such high value, that at length it has become regarded as sacred, it is called *Lien-wha*. Puzza, a Chinese divinity, is represented as seated on the flowers of the lotus. The gods of Japan, which are exhibited of a gigantic figure, are also seated on the blossoms of this plant. The ponds in China are generally covered with this beautiful aquatic blossom, which is also grown in large vases in the houses of the Mandarins. The roots and seeds are served up on ice at their breakfasts as a delicacy, mixed with kernels of fruits.

The Romans made repeated efforts to raise this plant, without success, which the ancients have celebrated in their writings. Homer mentions it with other flowers, as composing the genial bed of Jupiter and Juno; and the lotus-herb is said to have formed the green food of Achilles's horses.

Antiquarians assure us, that they recognise this flower on the head of Harpocrates.

Pliny describes the Egyptian lotus as a plant which grows in the marshes of that country, and which came up in the flats when the waters of the Nile returned to their natural channel. "They have heads," says he, "like those of the poppy, within which are seeds resembling millet, of which the inhabitants make bread." He relates, that "it is reported that when the sun goes down, those heads close up with leaves, and sink under the water, where they remain shut until the morning, when they appear above the surface and open, continuing this course until they are ripe, when the flowers (that are white) fall off of themselves. This lotus," says he, "has a root as big as a quince, covered with a black rind or bark, much like the husk of a chesnut. The substance within is white, and delicious to eat, particularly boiled in water or roasted in embers. The bread made from the seeds of this lotus," says Pliny, "is worked with water or milk. There is not any bread in the world (says report) more wholesome and lighter than this, so long as it is hot; but once cold—it is hard of digestion, and becomes weighty.

This plant was introduced into this country by the late Sir Joseph Banks, in 1787, and is of the Polyandria Monogynia Class.

FIELD PEAS.

Varieties commonly cultivated in North Carolina amongst Corn, or alone; are an excellent and profitable crop, and are capable of doing more for the Southern and Western states than clover and plaster have for Pennsylvania; modes and time of planting and gathering.

TO THE EDITOR OF THE AMERICAN FARMER.

Sir,

Among those who feel an interest in the advancement of Agriculture as a science, or delight in the diffusion of every incident that may tend to make this pursuit, either pleasant, or profitable, as an art; no one, I am convinced, can out-reach me in zealousness of disposition to see the profession immovably affixed by general opinion in that pre-eminent station, to which it is so deservedly entitled as the *natural* avocation of man. Yet my ardour has been silent, whilst I have placidly viewed with admiration, the liberal contributions of the most distinguished men of this country, in aid of your labours to establish a free interchange of practical observations, often generally profitable, and so obviously necessary to improve our Husbandry. But notwithstanding my thorough conviction of the utility and stimulating effects of portraying to the world the results of experiments in the plain garb of rural simplicity; I am nevertheless not free from the effects of that diffidence which too commonly loiters in the bosom of the humble farmer; always deterring him from committing to paper, *for publication*, ideas and experiments on subjects that he may be fully conversant in; a diffidence which a moment's reflection ought in reality to dissipate, with the concomitant dread of exposition and criticism.

The active zeal of our distinguished friend, Gen. Calvin Jones, in both acquiring and disseminating agricultural knowledge, produced the hasty Letter on the Cultivation of Peas, to which you have had access, and of which you have flatteringly requested the use, or something similar to it, for publication in your Journal. Whilst I comply with your request, I cannot but sensibly feel my inadequacy to do complete justice to the *general* worth of my subject; having myself realized but a few of the very many benefits which it is actually capable of affording: I am therefore flattered with a hope that what I may here say, will elicit from some abler and more experienced *Pea Planter* than myself, something new or more valuable respecting that vegetable.

The section of North Carolina, in which I live, is rather in what is called the "Eastern division," though very near the centre of the state, and is well adapted to the production of peas, as is the rest of this state, lying east of that range of hills which pervades the continent, running, if I am not mistaken, from Rhode-Island to Mississippi; nearly parallel with the ocean, and dividing the level or alluvial from the more primitive country. This division in which I live, may be set down as limiting, in this State the general cultivation of peas, as a profitable crop, although I believe that in the want of trial, and in the difference of the staple articles of the two sections; the one being a wheat and tobacco—the other, being a pork and corn country,—may be found the reason of Peas not being more commonly grown in the West; rather than in a want of suitable soils for their production. However this may be, it is very certain, that our Western Brethren are totally ignorant of the incalculable value of the crop: and a disposition to remain so, is too prevalent, as will always be the case in the absence of a "better acquaintance" with it.

Of the many varieties that we have amongst us, several of which I will venture to assert have never been seen in the West; I feel confident that some, if not all, would flourish in their exhausted old fields; and by proper management, be made the speediest means of restoring to something like original fecundity, those sterile wastes that are now so common in the scenery of a western residence. But our western farmers are not all who have been neglectful in the management of the pea, and culpable in not always allowing them their merited worth. We, among whom they have been ever more or less cultivated, are as yet ignorant of many of their valuable qualities, and too often deny them the little attention that they require, and through which alone we can justly expect much profit. With these admonitory observations I will proceed to detail the manner in which we are in the habit of cultivating them with us; adding such remarks as I may think material to give you as satisfactory an account of them, as proper limits will permit me.

I have been myself in the habit of planting as many as five different kinds of Peas for the last seven or eight years, and am acquainted with nearly as many more: of these varieties there are three that possess superior advantages as stock crops. Others are esteemed more delicate for the table, and are consequently more commonly grown for market. The former are what we here call the Cow, the Tory, and the Black pea; each of which, I am in the habit of planting amongst my corn, and also alone. When planted with the corn, as is the most usual method in this and the more eastern countries, they are dropt in the middle of the step, particularly when the rows are at right angles, and the corn is ploughed both ways. From the 25th of May to 15th of June, is, according to my observations, the best time of planting them; and in some one of the following ways, with a preference in their successive order. With a single horse plough, such as we call "Cutters," or "Jacks," having small mould-boards; a furrow is opened in a cross direction to the way the field was last ploughed, as nearly in the centre between the rows as possible. This plough is immediately followed by a Dropper, who is provided with the bowl of a common tobacco-pipe, which, if too large, is made by packing something in the bottom of it, to contain from 12 to 16 Peas. And here I must observe that this or a similar provision is greatly necessary, both to insure a fine regular crop, and to save seed, which otherwise would be profusely or sparingly disposed of, according to the whim or pleasure of the Dropper. In passing from one hill to the next, the hand has sufficient time to fill his measure from the vessel in which he carries the seed, as well as to drop them, without altering a common ploughman's gait. The peas are deposited in the newly opened furrow as near the centre between the corn hills on either hand as possible; the dropper is followed by a similar plough, covering the seed with great regularity, to the depth of from two to three inches, and leaving a surface for them to come up on, *at least* even with the surrounding ground, which is no inconsiderable advantage. The facility with which an indifferent hand can thus keep up with a plough is evident, and of course the row is finished "*at* once."

In planting them in this way, it is generally calculated to give the corn two ploughings afterwards, in a transverse direction, to finish it; which working will be all sufficient for the peas; and in poor land they will yield a more profitable crop than the corn; it is not however uncommon to give one of those ploughings, *the first*, in the same direction that the peas were planted, say two furrows on either side of the pea row, and unless the field is very grassy they will require no other work; for the share they will have in that *inevitably* given to the corn will be sufficient. Another way is common—to drop the seed with similar precaution, in the first or second furrow from the corn row, at the ploughing that it receives nearest the time thought best to plant, leaving the next furrow to cover them. My objections to this method, are, that the peas are not *in the middle of the row*, and they are consequently deprived of the benefits of the sun that they would *there* receive; and from their contiguity to one row of corn, this is materially injured by their ascending the stalks. It is also common to plant them in the last furrow in a row, at a seasonable ploughing, when the Dropper has them to cover with his foot, which is performed with considerable expedition, by persons a little accustomed to it. Planted in these various ways, peas come to great perfection amongst our corn, not however without doing it some injury; but not always perceivable, and never in the same ratio, that they are profitable, both to our stock and the soil on which they grow; having myself experienced by a succession of these double crops, the productiveness of the soil to increase fifty per cent in a few years: their foliage, vine, large tap-roots and shade, each separately and collectively, possessing meliorating qualities in a degree superior to any vegetable known to me.

When the corn is gathered, and soon after the first frosts, the hogs we intend to kill that winter are "turned in" on the peas, and with a feed of corn once or twice a week, they will fat more kindly than under any other management common in this part of the country; and when slaughtered, their fat is solid and white: epicures say, that hogs thus fed make the most delicious bacon.

The comparative values of the three kinds before mentioned, according to my experience, are that the Cow-pea, of a *light clay* colour, is rather the most prolific, the pods being much the largest, though, not quite so thick set on the vine: they are also, I think, more inclined to vine horizontally, not attaching themselves so much to the corn as the others; consequently doing it less injury: and they are a little preferred by *labourers* as a diet, *who* give either kind a preference to any other vegetable production accompanying their meat. But they lack the durability of the other two kinds, and will never remain in the field without rotting, as the others will, until late in the winter.

The Tory-pea is of a *red clay* colour. The etymological application of the name I have never been able to ascertain. They are also sometimes called "red rippers." These and the Black-pea possess very near the same qualities, with the the exception, that I think the black ones mature a little the soonest. Either will remain in the ground all the winter, and come up luxuriantly in the spring; indeed I have had them to stand tolerably thick the second year, when the land has remained that time in stubble.

I am in the habit of sowing rye, and sometimes wheat following a corn and pea crop, after the hogs have consumed the latter, and have the following summer after the grain is off, a fine growth of peas, suitable either to inclose, or graze; a sufficiency having escaped the search of the hogs, to seed the ground tolerably well; though not so regularly or thick, as they might have been sown. I never sowed them in the spring, *as a fallow crop*, until the present year, when I did, intending them as a preparation for wheat and turnips, and of course have not, as yet, realized their benefits, though thus far they exhibit every anticipated advantage, and it is in this way that they may be estimated as an inexhaustible treasure, at least to Carolina. Strange as it may appear to the votaries of red clover and gypsum, yet it is my candid opinion, that by something like equal care and management, they are qualified to confer more lasting benefits, at least to the Southern States, than either, or a combination of those, has ever done for Pennsylvania, or any other of our northern sisters. When sown broad-cast either to enclose, or to cut for hay, of which they make more nutritious and heavier crops than any thing else, one and a half to three bushels of seed will be required to the acre; thin soils requiring the greater quantity of seed. From the 1st to the 10th of May is the best time to sow them, when to be employed in these ways. They will thus by the 15th or 20th of August, on land that would produce two barrels of corn to the acre, be knee high; just commencing to vine and bear, at which time they ought to be cut, or ploughed under: being too thick to be very productive of seed. An earlier sowing which is recommended by some, I find, will not answer with the kinds I am speaking of; for as they are naturally of a very quick growth, requiring the very hottest sun to hasten them to perfection, if they are planted earlier than the time mentioned for sowing broad-cast; they will lack in proper time that portion of heat which they require; and will consequently stunt, and soon begin to shed their leaves: and this they will begin to do a little at the time mentioned as best to dispose of them with the scythe or plough, without bearing much: cold nights being, I observe, absolutely necessary to drive them to that natural function; and hence also the propriety *of late* planting when the crop is to be suffered to ripen, for the nights then become cool by the time their growth slackens.

I have also planted peas alone: a custom that is very common, where particular attention is paid to them for fatting pork. They are planted in drills five and a half feet apart, and require but one good ploughing and hand hoeing, to make the crop. After planting them in this way on the 29th and 30th of May, I have put my hogs on them the 22d September, when they were fine, and might be called half ripe. The hogs devoured the green in preference to the ripe pods, and after consuming both, the vines were eaten by them with considerable avidity. Although I acknowledge this to be a slovenly practice, yet the land is greatly assisted by it.—Independent of the benefit of the peas for hogs, when planted in corn-fields, they are frequently gathered from them for many other purposes by picking them into baskets, a tedious way I acknowledge, a bushel being considered a tolerable task for one hand to gather and clean in a day; or they are pulled up by the roots, vine and all, and heaped into piles in the field where the peas are thrashed out with sticks; after which the vines may be housed or stacked, as winter forage for cattle: and in this way a hand may get from three to six bushels a day. But this method is not by any means, void of serious objections; it being upon that ruinous and ungrateful, though common practice in husbandry, *of taking all without giving any:* totally depriving the land of the stubble, a poor pittance indeed, though one, for which usurious interest is promised.

It is however very common to convert them into winter and spring food for horses or cattle, without picking the peas at all. This is a very expeditious mode, and it will, I allow, do well on land that receives annual assistance from the farm yard, or is of that quality sometimes called "*inexhaustible*." But as one or the other of these two plans must be resorted to for saving the peas, and as both are somewhat objectionable, I would recommend the last with this difference, *let the vines be cut off quite near the roots* with a grass knife, sickle, or even a sharp hand hoe, instead of pulling them up; this method is equally as expeditious as the other, and leaves to the ground the roots, which are a considerable benefit to it, and are useless in feeding.—In feeding peas, freed from the pods, to stall cattle at the rate of half a gallon twice a day, to each head, I have never known them to do the cattle the least injury; but with a plenty of long food accompanying this quantity, they have always fattened kindly. I have never fed my horses with them in this state, though I have frequently given them in the pods, at the rate of a heaping peck to each head at a feed, and without ever noticing any injurious effects to result from them.

Of the other varieties, which I cultivate altogether for culinary purposes, or for market; I need only say, that they are of the white kind, with black and grey eyes. They may be planted several days earlier than the time mentioned for the others, and they will bear much sooner: it is quite common to have them on the table about the first of July. They are a delicious and wholesome diet. As I have, probably in a more suitable place, neglected it, I shall here mention that when planting among corn as described, a bushel will plant from four to five acres.—Having in the foregoing remarks, given as succinct an account of my experience in Pea-crops, as the subject would allow, or a proper regard for the interests of *many* of your readers would justify; I have only to add, that although it may be both tedious and useless to a large majority; it may nevertheless arouse some few prudent farmers who were not accustomed to witness the advantages of the field-pea cultivation, and induce them to give this crop a fair trial: this anticipation will fully recompence me for the time which I have bestowed on this communication.

I can easily, and I will forward you, in the course of the winter, by way of Newbern, the quantity of seed peas mentioned in your letter.

Your's most respectfully,
JOHN MACLEOD, *of Johnston.*

Near Smithfield, N. C.
September, 1822.

THE CULTIVATION OF GRAPES RECOMMENDED.

New varieties ought to be formed—and approved old ones naturalized—liberal offer of Cuttings and Plants.

TO THE EDITOR OF THE AMERICAN FARMER.

Sir,

I have been much pleased to find that the cultivation of the Grape begins to attract attention, particularly in the south. Though the atlantic states, as far north as Rhode Island, offer no serious discouragement to the cultivation of the Grape, yet the difficulties in the North, will certainly be greater at first, and final success be there, less important. Peopled as are the United States, chiefly by the descendants of the British nation, little attention has been paid to this branch of agriculture; but our necessities and our reputation call for the developement of all our resources, and we may hope that the ingenuity of our farmers will embrace every product, to which our soil and climate are fitted. The grape, like all our fine fruits and vegetables, is said to have been brought into Europe from Asia, and the Roman historians inform us, that grapes did not grow north of the Cevennes, a ridge of mountains in the south of France; yet north of this limit, now are cultivated the finest Vineyards in the world.

Such has been the advantage of naturalizing the grape, or of accidental crosses to which grapes as well as other fruits are liable; and hence has arisen from our seedling trees, such varieties in our apples, peaches, &c. as are unknown in Europe.—The Constantia wine from the Cape of Good Hope, is said to be the product of a vine originally brought from Burgundy, but it was probably raised from the mixed seed of Burgundy grapes.

We have much underrated our native vine; they grow spontaneously in every part of the United States, and in the South, particularly, produce a very pleasant fruit. Among the different species which are numerous, I shall mention a few which I am acquainted with, or have heard strongly recommended; the list might be easily augmented by many of our botanists, and they might therein render an important service to our country.

1st. The Scuppernong of North Carolina, a small round grape of a reddish purple colour, and fine flavour. It affords a pleasant full bodied wine, although hitherto manufactured with but little attention or skill. I am indebted to Mr. Cambreling, M. C. for this species, which appears to be hardy and vigorous.

2d. A species, name unknown, supposed to be a hybrid from the above; also received from North Carolina. This species has not yet produced fruit in my garden.

3rd. A South Carolina grape, brought here by Mr. Gibbs, late of New York. It is an oval, purple grape, with great fragrance, is a great bearer, and very hardy—It is less saccharine than No. 1., but I have heard that it affords very pleasant wine.

4th. Italian grape, or Orwicksburgh; discovered by Dr. Hulin of Philadelphia, a very fine, round, white grape, of a small size, and very hardy.

5th and 6th. The Bland and Alexander grapes, from Virginia. I have never seen the fruit of these, but they are highly spoken of, as well as the Burlington grape of New Jersey, and the Washita grape, lately introduced near Philadelphia. These, and other species approaching more or less to table or viniferous grapes, found in various sections of our territory, would without doubt, improve by cultivation; or by mixing with foreign species, and with little trouble be led to produce new and interesting varieties. I found the last month, a bunch of grapes of a peculiar and exquisite flavour, on a vine of the Sweetwater: examining the branch, I found it interwoven with a Muscat, and near a South Carolina grape, one of which had probably impregnated it. Unfortunately I neglected to save the seed, or I might have produced a new species of a superior kind. It is probable that the like accidents have produced most of the present varieties of grapes; and that the Scuppernong, Orwicksburg, &c. are Hybrids. It is certain that they are not deciduous, like the vines in our forests; which peculiarity may, however, be lost by cultivation.

Foreign vines have seldom succeeded in the Middle States, except in the shelter of our cities, but those vines have been generally brought from the mild climates of the south of Europe and Madeira; and a long course of naturalization would be necessary to render them productive. If care were taken to multiply them from seed, or by cuttings, the fourth generation might be reached in 12 or 15 years, when a hardy species would probably be procured for our own climate. A few years ago I was induced to make a trial of foreign grapes in my own garden, notwithstanding the ill success which my neighbours had met with; for I had witnessed the excellence of this fruit under the care of the skilful Horticulturists of Boston,* in spite of the rigour of their climate; and I preferred obtaining vines from the least favourable of those situations, in which they had succeeded. I procured a number of cuttings, from Boston, of approved grapes, such as the Sweetwater, the Chasselas, Black Hamburgh, Muscat and Alexandria. This is the third year that some of them have borne. The fruit I found equal to any of the table grapes of Europe, of those species, and the vines are perfectly healthy. Encouraged by this success, I was induced to procure a collection of vines from Germany, considering the climate somewhat congenial to our own; and by the aid of the Baron de Ledwer, Consul general from Austria, I received the last spring twenty eight species of the hardiest grapes selected by the superintendent of the Imperial garden at Schœnbrun, near Vienna. Though they arrived late in the season, and all sprouted, yet they have recovered themselves, and are growing satisfactorily—amongst these are

TABLE GRAPES.

Black Morillon,
Early Leipsick,
Early Vander Laan,
Chasselas,
Frontenac,
White Muscat,
Violet Muscat,
Frankinthall,
Faketi,
Queen's.

Viniferous grapes,

The Tokay,
Ofen, or Buda,
Minescher
and Schumlauer, } Producing Hungarian wines.

6. Varieties affording German wines,

Picolit,
Lacryma Christi, } Italian wines.

And Muscat, yelding the celebrated French wine of that name.

Of all these, and of the before mentioned kinds, I shall have some roots of the present year's growth and cuttings to spare this autumn and the ensuing spring; and I shall take a pleasure in supplying any of my friends, who are disposed to give them a fair trial, either in the Atlantic or Western States.

GEORGE GIBBS.

Sunswick, near New-York,
September, 1822.

FRUIT TREES, GRAFTING, &c.

TO THE EDITOR OF THE AMERICAN FARMER.

Edgefield, S. C. Nov. 3, 1822.

SIR,—I observed some remarks by an anonymous writer in the American Farmer, Vol. 4, No. 5, relative to my communication "*on grafting and fruit trees*," published in the first number of this volume, to which I should have replied sooner, but for a desire to make my observations more for the benefit of the public, than personal gratification. My object in communicating some hasty experiments to the public, was to invite attention to a very important subject; and all I ask in return for the few useful facts, which I stated from my own experience, is that others will subject them to a proper trial; this is the authority of nature, it admits of no appeal, and is the bar at which all such authorities should be arraigned. If any thing that I have stated be not a fact, I do not wish any person to believe it, nor do I wish any one to be deprived of the benefit of facts by individuals, who being ignorant of them deny their existence. If a man who makes known a discovery to the world, deserves the name of a public benefactor, he must certainly merit corresponding censure, who labors to deprive the world thereof. As I teach for nothing, I will not like Bernard de Palissy, promise to pay four fold for every error I may have taught; but I will give the public the assurance, that I am always provided with living witnesses to prove my statements.

When I assert that trees will graft together, I feel myself bound to prove it by an exhibition of the fact, to any one who will make application; but when I say that some will not, it is the duty of others to prove their contrary assertions, in the same way. But candor compels me to acknowledge, that although my notes had been prepared some time before I sent my communication, yet I neglected putting them into form, until the season for grafting was so near at hand, that I then threw them together too hastily to be sufficiently accurate. I beg leave, therefore, to make some corrections now. Instead of saying "*the budding season lasts from May till September*;" I should have said from March till October, though I would have the reader carefully to observe, that early budding is not so successful as late, and it is only such trees as put out early, and such as grow late, that can be budded in the extremes of the season. Some little errors of punctuation, the reader will readily enough correct; I will only suggest the correction of one, in No. 1, page 7, first column, 13 lines from the top, move the period which closes the sentence at the word "*wood*," and place it after the perpendicular cut l. This cut, which is intended to unite the two preceding horizontal cuts = thus I, the reader might take for the pronoun I.* About half way of the same column, a word is inserted, which conveys a different meaning to the one I intended: read until Mr. Andrew Knight *recommended*, instead of "recommenced." After referring to my notes, I cannot discover that I have proved the disagreement between the Apple and Quince, I must have asserted this inadvertently upon the authority of others. But I think I have sufficiently tried the Apple and Pear above ground, without success; and any thing that will only succeed under ground, as Miller rightly observes, is no stock at all. With respect to the Pear Stock improving the fruit of the Apple, I have no experience, but it is contrary to the authority of Mr. Cox, who has written a very useful book on fruit trees. This celebrated orchardist states, that the pear will graft to the apple under ground, but they are evidently deteriorated, except a few kinds, which will do tolerably well.

I omitted to mention the method I prefer for the preservation of twigs for late grafting. I graft them at the usual time to a different genus, the sycamore is very convenient; this will insure life, and inure them to the air, without swelling their buds. I insert them upwards of a foot in length, and perhaps they might be inserted much longer. The principal advantage in preserving to so late a season, is for regrafting such as have failed in the first operations. I grafted apples successfully the first of last June, which had been preserved in this way; the apple and pear are the only fruits I have attempted to preserve on the sycamore, Platanus. I have preserved the peach on the cherry, but I believe the hawthorn better, as it will live on this, with less propensity to grow, than on the cherry. I wish here to remark the folly of the philosopher's attending so much more to authors than nature or experiment. Shecut, in his unfinished work, remarks that "Almonds are budded on plum-stocks, in August; the stocks should be first planted in the nursery when of the size of a broom-straw, and the first or second summer after, they will be ready to receive the bud, and this appears to be the common language of gardeners; a method which would answer sufficiently well were we to live an antediluvian age. I transplanted in March of the present year, some wild plum-stocks, from four to five inches in diameter; having amputated the main trunk and principal branches in May, I inserted a number of buds, which by June, were progressing without a single failure. These stocks will have nearly as large tops as their original ones, by the time gardeners direct the insertion of the buds to take place. I omitted to mention the kind of stocks I grafted the white walnut, pear, &c. on. The white walnut, *Juglans cineria,* I budded on the black walnut, *Juglans nigra.* I lately budded the white walnut on the hickory nut, *Juglans regia;* they do not seem to take as well as on the black walnut, though some of them thrive very well. I have, this summer, budded some dozens of the pecan on the common hickory nut, without a single failure as yet; and some of them are growing finely. I believe my first failures were occasioned by waxing too extensively the bark of the inserted buds. The operator will seldom lose a bud of these trees, if they be inserted in the manner I have last described, for cutting entirely away the bark which is raised in the process, then confined by the finger or a string applied immediately below the bud, till the edges only of the barks are waxed, and in wrapping the string, let as much as possible of the inserted bark be exposed to the air, without allowing it access to the wound, which may be effected by a very small quantity of wax, neatly applied. I prefer cotton strings to woollen, as forming more even ones; and even common twine will answer perfectly well, if they be removed in eight or ten days, which is sufficiently long for them to remain in this climate. I have been very successful with my persimmon buds this summer; and I am not certain but the success of all difficult trees depends more on the expertness of the operator in applying them, than on the subsequent waxing. I have also budded many dozens of the mulberry, both white and black, without waxing them, with fully as good success as any other tree. I have this season made further trials on fall grafting; I inserted my grafts in September and October, with quite as much success as spring grafts; they are now progressing with very few exceptions.

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* *The best account of pruning vines for the garden which I have seen published in this country, is to be found in the 6th Vol. of the Massachusetts Agricultural Repository—page* 66.

* *The simplest method of performing any operation is always the best. I have, since writing the above, improved the process of budding, so as to be done with greater despatch, and to make the wounds heal nicely, without any subsequent trimming of the lapping bark, which sometimes grows over the inserted. My present method is to make my horizontal cuts precisely as wide apart, as the bark containing the bud to be entered is long; which I always ascertain by measurement; then I unite their two left hand ends with a perpendicular cut, thus* ⊏. *I now raise the bark with my thumb nail or knife, till my bud is introduced, which I keep close pressed with the left hand, while with the right, I cut, or break off the raised bark at the edge of the inserted, which now fits exactly in the place of the original bark, which is entirely removed. Another advantage in this method is, the perpendicular cut being to the side of the inserted bark, there is no danger of wounding the wood under it.*

To insure success, the twigs should be taken from a tree which has ceased growing; bearing trees by September are generally in a fit state, and be inserted on stocks, which are yet growing. Small stocks in rich cultivated ground, will grow till frost and even later. Those who practice grafting at any season, will avoid much vexation, from having their grafts blown off; if they would be careful to have the graft as near as possible of the size of the stock, and fit both sides with tolerable precision; each side will thereby unite with equal firmness, becoming as solid as any part of the stock; and of course preclude every future danger of breaking off at the juncture.

At what time the season of summer pruning of trees, is to be limited, I have not determined. I ascertained a fact this summer, which I refer to men of science, for an explanation. Some time in July I budded the peach on fine plum stocks, about the size of the thumb; and at the same time, on three stocks of the same kind and size, I budded Apricots. On one stock, I put one apricot and one peach bud; I headed the whole of them down at the same time, to force the buds; four out of the five budded with the peach, (after making rapid shoots) died root and branch; and the fifth seems in a dying condition. All the apricots are flourishing in the fullest vigour. The stock containing one bud of the apricot and one of the peach, seems with the apricot, to exhibit no signs of decay, and even the peach bids fair to live.

I also at the same time, no three stocks of the same kind, treated in the same manner, budded the Almond, (Amygdalus) one only of which died radically, the others succeed very well.

A most economical and superior grafting wax may be made agreeably to the following composition:

1 measure of melted beeswax,
1 do. of olive oil or hog's lard,
2½ do. of powdered argillaceous chalk.

I am at present, engaged in a number of experiments, on the production of vegetable hybrids by grafting, in which I have already experienced partial success; and so soon as I shall have any results worthy of the public attention, they shall be communicated.

The foregoing hasty observations, I submit entirely to your discretion, either to publish entire, in part, or not at all. With much respect, I remain, Sir, your's,

ABNER LANDRUM.

FOR THE AMERICAN FARMER.

ON THE BEST TIME TO SOW WHEAT.

EARLY SEEDING PREFERABLE TO LATE.

Mr. Editor,

It is a very prevalent opinion in the section of Virginia where I reside, that it is necessary to sow wheat late in the fall, to prevent its destruction by the insect called the hessian fly. Our farmers tell us that we should just give the wheat time to get above the surface of the earth previous to the setting in of the winter's frosts, that this formidable enemy may not have an opportunity of depositing its egg in the stalk. It is true by pursuing this course, we measurably prevent the calamity in the fall, but permit me to ask, if we do not at the same time, subject our crops to other calamities almost, if not quite as destructive as the one we are attempting to avoid?

We generally get a considerable portion annihilated by the winter's frosts, and the necessary consequence is, that the balance is always partially, and sometimes totally destroyed by rust, blight, &c.

After ten years experience, in the cultivation of, and several years particular attention to this very valuable, but with us, precarious crop, I have settled down in opinion, *that early sowing is always best.* My reasons for this opinion will appear in the following statement.—I do not intend to enter into any Entomological dissertation on the genus, habits, &c. of the Hessian Fly; but I will premise, by observing, that I explode the ridiculous opinion, of the egg of this insect being deposited in the grain. Any person who has taken the most superficial view of its habits, must be convinced to the contrary—it shews no disposition to feed on farinaceous matter, but preys on plants in their most succulent state.

In 1816, I sowed a crop of wheat between the 29th of October and the 7th of December, which we call late sowing; some of the wheat was not up at Christmas. The cold commencing immediately after the last sowing—small spots partially injured by fly in April; produced grain of fine quality—average crop, 9 bushels to one of seed.

In 1817, sowed between the 25th of October and 1st day of December; weather mild until Christmas; no fly to be seen in any of its different stages; very cold from Christmas until 18th January. From 18th January to 7th February, thermometer almost to temperate heat; wheat grew considerably. From 7th February till late in the spring, intensely cold. First warm open weather in the spring, wheat fields covered with fly; continued their ravages until harvest; crop entirely destroyed, except two acres, which had been heavily manured; from which two acres, although a great many maggots were to be found in the stalks, during its growth, I made 65 bushels of wheat.

In 1818, sowed no wheat. In 1819, sowed between 15th September and 19th October; scarcely any fly was to be seen in the fall; none in the spring; made average crop of 13 bushels to one of seed.

In 1820, sowed between October the 20th and November the 23d, in wet land altogether; some slight indication of fly in April. On the 7th day of June the most promising crop I ever saw.—From 8th of June to 15th, very hot and foggy; crop totally destroyed by rust; averaged 2½ bushels of withered grain for one of seed.

In 1821, sowed between October 21st and November 30th; weather cold in December; wheat late in coming up; nearly half killed by cold weather, there not being snow enough all winter to cover it; spring uncommonly favourable; no appearance of fly; grain very good in quality; average crop 3 bushels to one of seed.

In 1822, finished sowing on the 18th day of Oct.; on the 20th, weather being as warm as June, discovered a great quantity of fly moving on the surface; on the 30th of October discovered a good deal of fly in the maggot state in all the wheat, except where the land has been heavily manured, and there not a single maggot is to be found. Wheat at present, generally looks well.

I draw from this statement, several conclusions. 1st, That it is proper always to sow wheat as early in the fall as possible, that it may escape the several calamities to which it is subjected from being too late in ripening in the summer, as well as to give it time to recover from the fall attacks of the fly; for I have discovered, in examining this plant minutely, wherever the main stalk is much injured by the presence of the maggot, the coronal root has invariably put forth several very vigorous shoots by the side of it, independent of its original branches; and the more time these shoots can have to reach the surface of the earth, the better will they be enabled to withstand the winter's frosts. It is true they may also be attacked in the spring, but the farmer has the more chances of obtaining a crop of grain. The 2d conclusion is, that the farmer in sowing his wheat late, is almost certain to have it injured more or less by rust, blight, &c. and is not always shielded from the attacks of the fly. For it will be observed, that my crop sowed early in the autumn of 1819, was never assailed by the fly, whereas the latest sowed crop but one, was totally destroyed by that insect, and the latest crop I ever sowed, was partially touched by it; and on the other hand, the earliest sowed crop, escaped the fly entirely, and was the most abundant crop I ever made.

A third conclusion is, that lands heavily manured with good compost, and well pulverised, immediately before the crop is put in, will invariably escape from damage, though they may not from the attacks of the fly; and this last inference has led me to suspect, that, so far from its having been imported into our country as some suppose, it is an indigenous insect, and has become a formidable enemy to our grain crops, in consequence of the inability of our impoverished lands, to force the growth of the wheat, beyond their capacity to injure the germ.

These remarks have been hastily thrown together, without any attention to arrangement or language; if you find them intelligible, I am satisfied. I hope, shortly, to see some able pen upon this subject in your valuable paper.

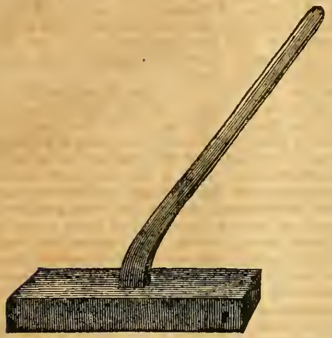
I am, your's, with respect,

CLODPOLE.

FLAX—EXPEDITIOUS MODE OF BREAKING; DESCRIPTION OF THE IMPLEMENT USED THEREIN; PRODUCE OF THIS CROP.

Extract of a letter, dated Long Meadow, October 4th, 1822.

"According to promise, I now furnish you with a description of an Irish implement for breaking flax. It is made of a block of solid wood, 15 inches long, 5 inches wide and 2 inches thick, into the middle of which is fixed a handle, about three feet long, having a curve near the block, as represented below.



The size of this implement may be varied to suit the person who uses it. Two planks about 15 feet long, are placed on their edges, about 3 feet apart, or further if the length of the flax requires it, on firm, solid ground. The workman then places his flax equally, between the planks, and with the brake strikes it hard, near to his foot; he passes over it from the one end to the other, and then works backward. When the surface is sufficiently mashed to turn over, he pushes up the seed ends with his foot, until he can, by stooping, reach to the farthest part, then turns it altogether, and after spreading it again, proceeds as before to break it, until it is sufficiently done. He then with his feet, pushes it together, and binds it in a bundle, which weighs from 16 to 20 lbs.

The honest Hibernian whom I have employed at this work, appears to understand the business well. He changes his hold every stroke; just at the moment when the brake strikes the flax, he slips his fore hand up and passes his hind hand forward, without the least stoppage. He strikes as often as a thresher would. A new hand would require a few hours to learn the stroke, but I find it can be readily acquired.

This method of breaking flax, leaves more of the Shives in the lint than our common brake does, but it makes less Tow from the Swingle.

The person who used this implement broke the produce of one acre in thirty-five working hours; in the morning he put the flax in the Sun to dry, and then having other business of the farm to attend to, he began to break between ten and eleven o'clock, had his dinner hour, and quit about six; he finished on the fifth day, and was not hurried or required to make uncommon exertion. I weighed the whole, and had 1590 lbs.—He, one day, directly after eating a hearty dinner, broke 156 lbs. in one hour and fifty seven minutes, which produced 32 lbs. of clean flax. I have not finished swingling, but have had several parcels cleaned, and find it will turn out, of clear flax, exactly the one fifth; so that I shall have only 318 lbs. a poor crop to offer for a premium.

This statement can be compared with others, and as the expense of the brake is nothing, it can be thrown aside if it is not approved of. But I believe that *George M'Laughlin* can break as much flax in one day, as a good hand can clean in five or six; and it cleans as readily as if broke by our common brakes, and makes less tow from the hackle."

TO THE EDITOR OF THE AMERICAN FARMER.

SHEEP—*Remedy for a Disease to which they are subjected, by exposure in hot weather, and especially when travelling.*

PHILADELPHIA, NOV. 6TH, 1822.

Dear Sir,—In the early part of August last, I sent some Merino Sheep from the vicinity of this city to the northwestern part of Pennsylvania—you will recollect the season was remarkably dry and warm. Some of the sheep were affected in a way that I have not seen described in any work, which has come under my notice, that treats of the disorders to which they are subject. I will, therefore, endeavour to describe, for you, the symptoms and progress of the disorder, and the mode of treatment suggested, and adopted with entire success.

The sheep became suddenly very drowsy, and it was with difficulty they were made to travel—if permitted to be stationary, they lay down immediately; when moving, they carried their heads near to the ground. The eyes became red and much inflamed, the head and ears much swollen; the latter so much so as in some instances, to close up entirely the orifice of the ear, and in a few hours death ensued.

Mr. Thompson, of Thompson-Town, in the interior of Pennsylvania, having examined the sheep afflicted as above described, remarked to the man who had charge of them, that his sheep had been similarly affected by travelling them in warm weather, and that he had lost many sheep before he adopted a remedy, *then* prescribed by him, to wit: to cut the ears on the upper side, commencing near the junction of the ears with the head, continuing the cut from 2 to 3 inches in length, but not to cut the ears entirely through, it being unnecessary to do so. Mr. Thompson's suggestion was adopted; on cutting the ears, a yellowish, watery matter exuded in very considerable quantity; the sheep began to recover shortly thereafter, and in a few hours were perfectly well. Several sheep were subsequently attacked with this disorder on the journey, and after reaching their destination; but not one of them, treated as above, died.

It is possible that many sheep are annually lost by this disorder, in consequence of exposure to the action of the sun, during the summer months, though they are not permitted to travel beyond the bounds of a farm. If so, the provision of suitable shade for them, particularly in the middle of the day; frequent examination of the flocks, and the application of a knife to the ears, if any of them are affected as above described, may be the means of saving many of those valuable animals. The finest and most esteemed wool of Saxony, is the produce of sheep which are defended from the weather by linen coats.

I am, Dear Sir, Your's,
Very respectfully,
C. J.

J. S. SKINNER, ESQ.

To the Correspondents of the American Farmer.

QUERY.

What might be regarded as the average surplus of production, on a farm of one hundred and fifty acres of land, cultivated in Wheat, Oats, Barley, and Grass enough for the pasturage of the cattle used in the cultivation? The land supposed to be of average quality, say yielding about 20 bushels to the acre. And how many regular hands are necessary for the cultivation of such a farm? M. C.

Hints and Experiments on the selection of Seeds; particularly of Vines.

Allen County, Kentucky, Aug. 30th, 1822.

J. S. SKINNER, ESQ.

Dear Sir,—I will now give you a short account of an experiment I made with vine fruit. Having for many years observed, that some pumpkins, water melons, cucumber, and cymblin vines run 10, 12, and even 15 feet before any fruit appeared, and that others would have fruit before they run half that distance, I concluded there was a natural reason for its being so. And in 1819 I took a cucumber and split it lengthwise, and subdivided it into three equal parts across the fruit, and kept the seeds carefully apart, those in the end next the vine, I marked *But* seeds, and those from the centre, *Middle* seeds, and those from the end on which the bloom grew, *Top* seeds, and I planted them separately, in new ground, well manured for the experiment, in the spring of 1820; I carefully attended to three hills from seeds of each part of the fruit, divided as stated above, the hills being about 12 feet apart. All of the plants were alike flourishing; the vines from the *But* seeds ran from 8 to 10 feet before any fruit appeared, and these were small, with a neck; the vines from the Middle seeds ran from 4 to 6 feet before fruit appeared; the fruit was better and without a neck and four-fold; the vines from the Top seeds produced fruit large, fine and in abundance, and the first fruit was on the third joint of the vine from the surface of the ground.

I have continued to save seeds from the top or bloom end, and now have cucumbers on the first and second joint, &c. I have been endeavouring to make the experiment on all kinds of vine fruit; corn and peas likewise, but the cut-worms have, in a great measure, disappointed me; notwithstanding this I have succeeded so far as to satisfy myself that real advantages may be gained by making such selections of seeds. I would have given the above account last year, but I wished to carry the experiment completely through a variety of kinds, &c. If it is new, or you consider it worth attention, you are at liberty to give it an insertion in your paper.

I am your's, with esteem,
SAMUEL GARRISON.

TO THE EDITOR OF THE AMERICAN FARMER.

RECEIPT FOR PICKLING BEEF.

October, 1822.

DEAR SIR,—You have published a number of excellent receipts for curing beef, but as none of them contain the alkaline ingredient, on which the high fame of my grandmother's pickle has safely rested for the last half century, and which is believed to make it superior to any other, I send you the whole recipe, as worthy of preservation in your valuable journal, and of general adoption. Several writers have asserted that boiling the pickle will harden the meat; I must, from experience, dissent from this opinion. Boiling and thus purifying the salt and water, will certainly make a pickle that will bear warm weather better than pickle which has not been boiled—and I am convinced that the hardening of beef has been improperly ascribed to this practice. Whenever the hardening takes place, it is a consequence flowing from some other cause, and not justly attributable to the boiling.

Your Obedient Servant,
SWEET PICKLE.

MY GRANDMOTHER'S PICKLE.

The Beef, as soon as the butcher has finished dressing it, should be hung in a cool place, and become thoroughly cool to the marrow—then cut it up, and cleanse every piece, of blood, &c. in pure cold water; then let the pieces intended for hung beef, the briskets, &c. be lightly rubbed with blown salt, and laid in a pickle tub, that has been nicely cleansed; on these lay the rest, the thickest pieces first, till all, to be pickled, are snugly packed in. If the weather will permit it, the beef will be tenderer and nicer by being suffered to hang two or three days in quarters, or to remain 24 hours in the pickle tub, before the pickle is poured on it.

Take 12 or 14 gallons of pure water (if not pure, make it so, by boiling well after the salt has been put in, and taking off the scum as it rises) and stir in good blown salt till it produces a brine, that will bear an egg well. The day before the salt and water are put together, put on a pot of pure water, into which put clean wood ashes, and boil till they produce a good ley, that feels a little slippery between the thumb and finger; put this ley away till the next day to settle; it will then look like pure water. Measure one gallon of this ley, taken up clear, and pour it into the salt and water, after that has been made to the proper strength, or if you boil, put in the ley directly after boiling. Also put in at the same time four ounces of saltpetre beat fine; and one pound of brown sugar, or a pint of molasses—Stir the ingredients well together and let them stand till next day; then carefully scum off every thing, that has risen, and pour this pickle on the packed beef. The beef ought to have on it a barrel heading, or circular piece of wood to fit the size of the pickle tub, so as just to move up and down, and on this piece of wood put a flat, heavy, clean stone to keep all down snug in pack, and the pickle ought to cover the beef completely, and remain well above the top piece. In pouring the pickle on, do it carefully and steady, and reject any sediment that may appear at the bottom of the vessel, in which you have made it. In butchering and handling the meat, and in every part of the process, attention should be paid to perfect neatness and cleanliness.

The above quantity of pickle is sufficient for 500 weight of beef. If more beef is to be pickled at once, the quantity of pickle must be increased accordingly, observing to keep up the same proportion of all the ingredients.

N. B. The boiling the salt and water in every instance is the safest, especially if the pickle be made before the end of November, or after the middle of February, and is not much trouble, even though you may not have a boiling vessel, that will hold more than half or a third of it at once.

* * *

Extract of a letter, dated Liverpool, Oct. 1, 1822.

Sir—The import of Cotton during Sept. owing to adverse winds, amounted only to 13,654 bales, of which 8,141 were from the U. States; whilst the sales consisted of 14,900 bales, of which 7,000 were taken on speculation, and 3,000 for export. In the first part of the month, two large public sales precluded much private enquiry; but they were well attended, and prices advanced nearly ¼d per lb. at each. Then the demand became brisk, and though last week it was more moderate, U. S. Cotton is higher by ½d. a 5-8d. per lb. since 1st of Sept. As the consumption daily increases, and supplies from the U. States are likely to be retarded, by previous accounts from hence, some moderate advance may be hoped for, towards the latter end of the year, especially for good Cotton; though no material change seems probable now. Middling qualities of Sea-Island, by their low prices, excite the attention of speculators, and will be dearer. The sales of Tobacco, chiefly to the Trade, have been considerable, as per note, below. No new Tobacco, either leaf or stemmed, yet sampled, has proved fine, and but little good; such would sell readily. Prices are nearly the same as last season, except for stemmed, which are ¼d. a ½d. higher; and for leaf, those worth 5d. and upwards, a ½d. more could now be obtained. A parcel of fine Kentucky stemmed has brought 5d.—There is, however, no demand for export or speculation. In London, a cargo of Virginia, afloat, was sold about the middle of the month, at 27s. per 100 lbs. No U. States Flour here. About 700 casks of Rice have been sold at previous prices. 3,200 bbls. of Turpentine brought higher rates by 6d. a 9d. per cwt.; and none now in first hands. The demand for Tar revives, but holders require higher prices. No U. States Ashes here—Montreal Ashes as before. No alteration on Beeswax or Staves.

We remain, respectfully,
Your obedient servants,
KING & GRACIE.

Prices Current, at Liverpool, Oct. 1, 1822.

Ashes, U. S. Pot, 44 a 46s. 6d. per cwt.—Pearl, 44 a 45s.—Bark, Q. Philadelphia and New York, 10 a 15s.—Beeswax, American, 10 a 11*l*. 10s.—Cloverseed, Red, none—Cotton, Sea-Island, 9 a 13½d per lb.—Do., extra fine, 15 a 20d.—N. Orleans, 6¾ a 10d.—Upland, 5½ a 7½d.—Ten. and Alab. 5½ a 7¼d.—Surat, 6¼ a 7d.—Bengal, 5¼ a 6½d.—Flax seed, Am. hhd. of 7 bush., none—Flour, Am. fine, in bond, bbl. Sour, do.—Indian corn. do.—Naval stores—Tar, 10 6 a 11s. 6d. per bbl.—Virginia, 12s. 6d.—Turpentine, 11 6 a 13s. 6d. per cwt,—Rice, Carolina, in bond,—13 6 a 18s. 6d.—Staves, W. O. bbl. 1200, 8*l* a 12—Pipe, none—Hogshead, *l*12 a 16.—Tobacco, Virginia, 2½d. a 6½d.—do. stemmed, 4½d. a 6½d.—Kentucky, 2 a 3½d.—do. stemmed 3½ a 4½d. per lb.

Cotton imported this year, at Liverpool—American 244,226; Brazil, 109,089; E. India, 753; W. India, 21,412.—Total, 375,480 bags. Same period in 1821—228,414 American; 83,732 Brazil; 1,584 E. India; 21,903 W. India—Total, 335,633 bags. Sales of Cotton from the 31st of Aug. to the 27th of Sept. 1822, inclusive—Sea-Islands, 2350; Orleans, 7,640; Boweds, 23,440; Tennessee, 2,330 bags.—Total sales this month—American, 35,760; Brazil, 10,520; West India, 2,540; E. India, 160.—Total, 48,980 bales. Total sales this year, 336,505 bales, of which 216,260 were American; 92,190 Brazil; 19,310 W. India; and 8,745 E. India.

Sales of Tobacco—330 hhds. Virginia Leaf; 593 Stemmed; 100 Kentucky Leaf; 50 Stemmed; Rappahannock, 50.

COLD PRESSED CASTOR OIL.

Extract of a letter to the Editor, dated Huntsville, Alabama, 10th Sept.

"A friend of mine is engaged at this time in cultivating the Castor Oil Bean, and would be glad to learn through the pages of the Farmer, the process pursued northwardly in making the cold pressed oil, with a description of the press commonly used for that purpose."

To any of our friends who possess any particular knowledge on this subject, we reiterate the wish for information.—*Edit. Am. Farm.*

THE FARMER.

BALTIMORE, FRIDAY, NOVEMBER 15, 1822.

IMPROVEMENT OF NEAT CATTLE—

Pedigrees of imported animals, &c. &c.

We have witnessed with peculiar pleasure, the persevering and praiseworthy zeal which Col. Jno. H. Powell, of Philadelphia, continues to manifest for the improvement of our breeds of Neat Cattle; as well by judicious selections from our native stock, as by the importation of chosen animals from England.

In No. 6, of this Vol. page 48, we published a list of animals, which he had collected chiefly from the Eastern States, for the purpose of exhibiting them in Pennsylvania, and distributing them, *at cost*, amongst the Farmers of his native and other states. And in No. 16, pages 122—3, our readers will have noticed an official account of the exhibition, made by the same gentleman, of some of those animals, and of other native and imported stock, before the Philadelphia Agricultural Society, for nearly all of which premiums were awarded to Col. Powell, that were instantly and generously relinquished by him, for the benefit of the Society.

In the same number, the effects of this gentleman's judicious and spirited efforts, to advance the interests of his neighbours, may be traced through the list of premiums obtained by them for superior young Neat Cattle, that partook of the blood of the improved breed, which he had brought to their notice and placed at their service.

We rejoice to learn that Col. Powell has ordered some more animals from England, and hope that he may realize his loftiest expectations from the enterprize. From Mr. Wetherill, the breeder of Mr. Williams' celebrated Bull "Denton," and from Mr. Champion, the breeder of Colonel Lloyds' beautiful and promising Bull "Champion," he may justly expect to receive some of the most improved cattle of Great Britain. And no where could such Stock be better placed than within the reach of Pennsylvania Farmers; who, like their judicious fellow citizens of Massachusetts, will gladly embrace every opportunity to improve the breeds of their Neat Cattle.

And that all may hereafter avail themselves of the offspring of such animals as prove to be the best of their kind, we have proposed to record the pedigrees of imported and celebrated stock, which we will thankfully receive from owners, or others who possess such information, and carefully register it in our columns. We are indebted to Col. Powell for the following pedigrees of two very valuable imported animals, and two others of imported breeds.

PEDIGREES.

FLORA, (an imported thorough bred improved Durham Short Horn Cow) was by Sampson—dam was Betty—grandam Old Betty, who came from the neighbourhood of Darlington, Durham County, England—Sampson was by son of Ossian—Ossian was by Favourite—Sampson's dam was by Comet—Comet was by Favourite.

ROSE is also a thorough bred improved Durham Short Horn Cow, and was purchased near Darlington.

LOTHARIO, a bull of 7 months, was from Rose, by George—George was by Phenomenon—dam by Favorite—grandam by H. Allison's Gray—

great grandam by T. Charge's Old Gray—Phenomenon was by Favorite, from Elvira, bred by Sir H. Vane Tempest—Elvira was by Old Phenomenon, from Princess, both bred by Robert Collings—Princess was by Old Favourite.

CORA, was by Mr. Williams' bull Denton, from Julia—Julia was by Denton, from Mr. Williams' imported cow Devon—Denton was by Old Denton—dam by Baronet—grandam by Cripple—great grand dam by Irishman—Old Denton was by Comet.

* * *

MARYLAND CATTLE SHOW, NO. 3.

The Agricultural Exhibition held last week, at Easton, in Talbot County, of this State, agreeably to previous notice, was highly creditable in all particulars, to the Farmers; and also, to their honour be it spoken, to the Farmer's wives in that section of the state. An account of what transpired, sufficiently detailed and accurate for general purposes, has already appeared in the newspapers; and we should be content to adopt it, were it not incumbent upon *us* to record, for future reference, the *Official Reports*, which will, without doubt, be soon prepared for publication.

It was a matter of regret that a greater number of Farmers was not present, from this shore; but we can assure them that the loss was their's, for every thing seemed to conspire, to entertain and gratify those who went. To most of them the face of the country was new and singular; the season of itself was delightful, and the Practical Farmers attending very numerous, and of the highest respectability. The exhibition was highly promising in every department; the samples of butter exquisitely nice in appearance and quality, the specimens of *Domestic* Manufactures, properly so called, varied and beautiful of their kind, and the several species of live stock, collected with little time for preparation, fully justified all reasonable expectation.

To gentlemen in attendance from a distance, the hospitality of Talbot, was extended with characteristic bounteousness and elegance, and the only mortification experienced was from the want of time to enjoy it more extensively. Whilst some of us yielded to previous engagements, to visit the hospitable mansions of the Goldsboroughs, the Hammonds, the Tilghmans, &c. others embraced this opportunity of seeing the celebrated Wye House Estate—the splendid property of Col. Lloyd, of the U. S. Senate, who had the rare satisfaction to entertain in the country, three other eminent members of that body, with a numerous company of friends and respectable guests from different states.

We shall here anticipate the official account of the proceedings of the Society, so far only as to state that, James Howard, Esq. was unanimously elected secretary for this Shore, in place of his much lamented brother, the late Gen. John E. Howard, Jr.

* * *

PRICES CURRENT.—CORRECTED WEEKLY.

White wheat, $1 27 to 1 32—Red do., $1 18 to 1 23—Rye. 70 to 75 cts.—Corn, 62 to 65 cts.—Oats, 35 to 38 cts.—Flour, best white wheat, $7 50—Superfine, $6 12½—Fine, $5 75, Wharf prices—Beans, $1 25 to 1 37½—Peas, black eyed, 70 to 75 cts.—Clover seed, 9 to $10—Whiskey, from the wagons, 35 to 36 cts.—Apple brandy, 30 to 32 cts.—Peach do., 70 to 75 cts.—Herrings, No. 1, $3 62½—No. 2, $3 37½—Shad, No. 1, none—No. 2, $6—Bacon, round, $10 to 11 per cwt.

Maryland Tobacco continues very dull—prices have not varied for several weeks past.

W. PECHIN,

With a feeling in which pleasure and pride are blended, acknowledges the receipt of a number of orders from his friends for supplies of his MALT BRANDY, in anticipation of the means now adopted, to furnish the public with an extended chance of testing the quality of this liquor. He assures those who have thus confided in *his* recommendation, who have not been furnished, they shall not be disappointed.

For the accommodation of such as have been more cantious, wishing to "taste and try," the MALT BRANDY is now for sale in different convenient sections of the city, by the following persons, proprietors of public houses and liquor stores, viz. Messrs. Richard Denovan, W. J. Alcock, Lexington street—A. Hussey, Howard st.—C. W. M'Clean, Cugle, T. A. Norris, Barnum, J. Wilson, Ross, Baltimore st.—G. W. & H. Miller, Chapman, M'Kenley, opposite Marsh Market, Jas. C. Maguaran, Court-House Hotel—Williamson, Fountain Inn—Sinners' Hotel, Water st.—Escaville, Exchange Coffee House—J. Hanna, Light street wharf—M'Keldin, Pratt street—J. Ramsay, B. Wilson, James M'Donnell, Keller's Hotel, Fell's Point.

As to the pleasantness which it may dispense, as a mere beverage, the *Malt Brandy* is offered as an elegant and ample substitute for Cognac; but it is confidently asserted, that in more essential and important properties, as attributed to it, and as delineated in a former advertisement, *it contends for superiority*, which a scientific analysis can maintain. Its extreme purity and mellowness will be declared by the pleasing and *peculiar** character of its effects; and in these respects it will not suffer in comparison with any other first rate liquor.

After the public fairly estimate its merits, such as can command a choice, will, surely. so far respect comfort and health, as to abstain from the use of the ordinary run of whiskey, frequently the product of corn; which, when new, is calculated to corrode and eat out the interior of the most sturdy system.

Of French Brandies nearly the same may be said; for few constitutions can contend against their heavy astringency, combined with the deleterious consequences of their corrosive power—when there is an indulgence in their constant use. Certainly no individual can be willing to sap the stamina of his existence, when in his power to nurture and promote health and prolong life!

Such substantial materials as malted barley and wheat and rye, are entitled to, and should command a preference over the slender commodity of which Cognac Brandy is the product. Distinct from the demands of patriotism and national consideration, it is fearlessly submitted to the public; not dreading even the most severe scrutiny and cavil of foreign prejudice!

Orders for the pipe, barrel, half barrel or demijohn, will be received by *W. Pechin*, personally. or through the medium of the post office.

Any brandy delivered not giving complete satisfaction. may be returned.

☞ **The term* "peculiar" *would, indeed, be rendered* interestingly *emphatical, if a reference could be* safely *made, to a justly celebrated modern publication, for the character given of the root, which constitutes the important* COGNAC *flavoring and coloring principle of the* Malt Brandy.

PILGRIM'S CHOICE,
Baltimore County, Aug. 5—8.

A Grazing or Market FARM,

FOR SALE.

The Stockholders in the City Bank of Baltimore are especially advertised that there will be exposed for sale, at public auction, in the Exchange, at Baltimore, on Monday the 25th of November,

A Tract of Land, lying North and South of the Baltimore and Frederick Town turnpike road, near the 5th mile stone; it is composed of several racts or parts of tracts, containing upwards of three hundred acres, about eighty acres are in wood the residue, or a great part thereof, in grass. It is believed that there is not a tract of land of the same extent, within six miles of Baltimore, its equal in fertility, and none better adapted to plaster. The land adjoins Mr. Skinner's farm Bovally, and would form, if united, a very fine estate. The buildings are, a house on the north side of the road, suitable for a manager, and on the south side there is a small tenement that has hitherto been occupied by the labourers employed on the farm, and near to which there is a very extensive and well arranged barn, built within a few years past. A stream passes through the meadow; it is said that on it there is a seat and fall suitable for a country mill. Those who may desire to purchase a market or grazing farm near Baltimore, may not in twenty years find one in every respect so desirable.

Upon the authority of the late manager, it is stated that upwards of five hundred dollars have been received for grazing alone, between harvest and Christmas. The land is generally well enclosed by a good post and rail fence.

A plat of the whole tract indicating the situation of the wood, its extent, &c. &c. can be seen by a reference to the undersigned. The terms of sale are one-fifth cash or City Bank Stock, or a sixty days note, satisfactorily endorsed, payable as aforesaid. The residue at 12, 18 and 24 months, with interest on notes in like manner endorsed. Should not this property be sold on the day and manner herein contemplated, it will afterwards be disposed of at private sale, by

JOHN B. MORRIS.

Valuable Live Stock for sale

by the Editor of the American Farmer.

A thorough bred Alderney Bull, MARK ANTONY—price $200.

Two *large* Mares, half blooded, one four, the other five years old, warranted sound and to work well—both are believed to be in foal by Tuckahoe. The price of these mares is $80 for either, or $150 for the two.

A young mare Mule of last spring—well grown, of bay colour—price $40.

Some Pigs of the Parkinson, Bedford and Suffolk breeds—price of these $6, with pen, feed, &c. for a voyage.

A few valuable Sheep, of the Bakewell breed, from the celebrated stock of John Barney, of Delaware.

The following animals are also offered for sale, by a gentleman within two miles of Baltimore, at the specified rates. For further particulars, reference may be had to the Editor of the American Farmer.

One 3 years old half blooded Alderney Cow, got by the old imported bull, and with calf by Geo. Howard's imported Alderney—price $50.

Two half blooded Alderney Heifers, by M'Kim's Alderney bull, 1 year old last June, and now ready for the bull—price, for each, $30.

A number of half blooded Bakewell Ewes—say 25 or more—2 years old, $5 each.

A Filly Colt, one year old last June, by old Top Gallant, price $40.

PUBLISHED BY JOHN S. SKINNER.

AGRICULTURAL EDUCATION.

We have just received the following account of proceedings had at the last meeting of the Agricultural Society of Albemarle; and we hasten to lay before our readers, the plan which has been devised by that Society, for the establishment of a PROFESSORSHIP of AGRICULTURE in the University of Virginia.

It was to have been expected that a SOCIETY which boasts of its Barbours, Randolphs, Cockes, Divers, Minors, and others—with President Madison at its head, would do something worthy of themselves and the great objects of their association; accordingly we find that classic scholar and profound statesman, who from his earliest years, has devoted to his country's service, the energies of a great mind, has now been invited by his neighbours to put forth the weight of his name and opinions, in support of a most noble project. Well may this people glory in their Institutions, which give facile opportunities for the fullest developement and best use of talents bestowed by the Creator upon rising generations; reserving at the same time, the disinterested and benevolent efforts of all who survive the fiery ordeal of the public service; and how appropriately do these tried sages employ their time, when they exert their persuasive influence, in furtherance of social projects, wisely calculated to improve our own country—to augment the glory of this age, and the happiness of posterity.

This appeal to the people of Virginia, will we doubt not, be suitably answered by the *acts* of her citizens; one and all of them will feel it to be their duty, and find it a pleasure to assist the illustrious Madison in placing AGRICULTURE, "the mother of all the ARTS and SCIENCES on the pre-eminent ground which she deserves to occupy." May success attend this enterprise of Virginia, and her sister states reap the benefit of her bright example.

Edit. Am. Farm.

Proceedings of the Agricultural Society of Albemarle, Va.

MONDAY, OCT. 7, 1822.

Officers elected to serve for one year.

JAMES MADISON, *President.*
TH. M. RANDOLPH, 1*st Vice President.*
JAMES BARBOUR, 2*nd Vice President.*
NIMROD BRAMHAM, *Treasurer.*
PETER MINOR, *Secretary.*
TH. W. MAURY, *Asst. Secretary.*

COMMITTEE OF CORRESPONDENCE.

James Barbour, Th. M. Randolph, Th. G. Watkins, Wm. D. Meriwether, and Peter Minor.

COMMITTEE OF ACCOMPTS.

Thos. Eston Randolph, Dabney Minor, and John Winn.

A communication from Wm. H. Meriwether, 'on the employment of Overseers,' was read.

Col. Bramham presented, in the name of John S. Skinner, Esq. of Baltimore, a small bag of wheat and some beans of different kinds, brought from the Pacific Ocean by Capt. Ridgely of the frigate Constellation—whereupon, *Resolved*, that the Society's thanks be presented to Mr. Skinner, and that the said seeds be left in the care of Col. Bramham for distribution.

On the motion of Dr. Frank Carr, the following resolutions were adopted:

Resolved, That this Society hold in just estimation the important benefits which the agricultural interest of our country have derived from the introduction among us of the system of horizontal ploughing.

Resolved, That a committee of three be appointed to procure and present to Col. Thomas M. Randolph, Governor of this commonwealth, to whom our agriculture is indebted for the above improvement, a piece of plate with an appropriate device and inscription; and that the said committee be authorised to draw on the Treasurer for the sum of thirty dollars for the purpose of carrying this Resolution into effect.

On motion of Gen. John H. Cocke, the following Preamble and Resolutions, were adopted:—

Whereas, the establishment of a Professorship of Agriculture, in one of the principal seminaries of learning in this State, is a measure eminently calculated to hasten and perpetuate the march of agricultural improvement, already so happily commenced; And whereas, there are grounds to believe that such an institution may be incorporated into the University of Virginia, a position at once most advantageous and convenient to every part of the State: And whereas this Society could not make an appropriation of its funds more conducive to the permanent attainment of the primary objects of its institution—and as it is reasonable to expect that all the Agricultural Societies, the Farmers and Planters generally, will cheerfully contribute to an Establishment of such universal interest—Therefore

Resolved, That one thousand dollars of the sum now in the hands of the Treasurer of this Society, be appropriated to the establishment of a Fund, the profits of which shall go to the support of a Professorship of Agriculture at the University of Virginia.

Resolved, For the furtherance of this design, that the President be requested to prepare an address to the other Agricultural Societies of this State, requesting their co-operation in this scheme—and further to promote the same object, and increase the said fund, that a committee be appointed to solicit donations not to exceed one dollar from individuals in every part of this Commonwealth.

Resolved, That the aforesaid appropriation, together with all that may accrue under the foregoing Resolutions, be loaned to individuals on good personal security, or to corporate Bodies; and that when the sum loaned to any one individual shall amount to one thousand dollars or upwards, landed security shall be required: That the interest shall be payable semi-annually, and shall be re-invested, until the yearly profits of the Fund shall be sufficient to afford an income equal at least to a Professorship in the University.

Resolved, That the funds above referred to, together with donations of books, and property of any other description, be with the permission of the Legislature, transferred to the Rector and Visitors of the University in their corporate capacity.

(Extract from the minutes.)

P. MINOR, *Sec'ry.*

In pursuance of the above resolutions, the following letter has been addressed to the Presidents of the Agricultural Societies in the state of Virginia.

To the President of the Agricultural Society of—,

October 21st, 1822.

Sir,

The enclosed Resolutions of the Agricultural Society of Albemarle, explain the wish of the Society to provide for Agriculture the advantage of a Professorship, to be incorporated in the University of Virginia; the means proposed for making the provision; and the hope entertained of a general co-operation in the scheme.

The present seems to be an important crisis in the Agriculture of Virginia. The portions of her soil first brought into cultivation, have, for the most part, been exhausted of its natural fertility, without being repaired by a meliorating system of husbandry; and much of what remains in forest and can be spared from the demands of fuel and other rural wants, will need improvement, on the first introduction of the plough.

These truths are now sufficiently impressed on the public attention; and have led to the establishment of the Agricultural Societies among us, which are so laudably promoting the work of reform.

As a further means of advancing the great object, it has occurred to the Albemarle Society, that a distinct Professorship in the University of the State, if sanctioned by the proper authority, might be advantageously appropriated to the instruction of such as might attend, in the theory and practice of rural economy, in its several branches.

To the due success of agriculture, as of other arts, theory and practice are both requisite.—They always reflect light on each other. If the former, without the test of the latter, be a vain science; the latter without the enlightened precepts of the former, is generally enslaved to ancient modes, however erroneous, or is at best but too tardy and partial in adopting salutary changes. In no instance, perhaps, is habit more unyielding, or irrational practice more prevalent, than among those who cultivate the earth. And this is the more to be lamented, as agriculture is still so far below the attainments to which it may fairly aspire.

A professorship of agriculture might derive special advantage from the lights thrown out from the chair of Chemistry in that Institution. This science is every day penetrating some of the hidden laws of nature, and tracing the useful purposes to which they may be made subservient. Agriculture is a field on which it has already begun to shed its rays, and on which it promises to do much towards unveiling the processes of nature to which the principles of agriculture are related. The professional lectures on chemistry, which are to embrace those principles, could not fail to be auxiliary to a professorship having lessons on agriculture for its essential charge.

The fund contemplated for the support of such a professorship, is to consist of a sum drawn from unexpended subscriptions, from special donations, and from a diffusive contribution not exceeding a dollar from an individual. It is hoped, that for a purpose of such general utility, the number of contributors will more than make up for the smallness of the respective sums; and that with the other resources, means may be gathered not only adequate to the immediate views entertained; but justifying an enlargement of them.

Should this prove to be the case, it will be an improvement of the plan of agricultural instruction, to provide and place under the superintendance of the Professor, a small farm in the vicinage, to be cultivated, partly as a pattern farm illustrating practically a system at once profitable and improving, partly as an experimental farm, not only bringing to the test new modes of culture and management, but introducing new plants and animals deemed worthy of experiment. In obtaining these, aid might be found in the patriotic attention of the public and private Naval Commanders, in their visits to foreign countries; and it might well happen that occasional success in rearing new species or varieties, of peculiar value, would yield in seeds and stocks, a profit defraying the expenses incurred on this head.

A farm exhibiting an instructive model, observed as it would be by occasional visitors, and understood as it would be in its principles and plans, by students returning to their dispersed homes, would tend to spread sound information on the subject of agriculture, and to cherish that spirit of imitation and emulation, which is the source of improvement in every art and enterprize.

You will oblige, Sir, the Society of Albemarle, by laying this communication before that over which you preside ; and by transmitting its sentiments thereon ; which will afford particular pleasure, if they should accord with the views of this Society, and promise so valuable a co-operation in carrying them into effect.

By order of the Society,
JAMES MADISON, *Pres't.*

OBSERVATIONS, &c.—OLIVES, GRAPES, WOOL AND SILK.

We have just received the following Tract from its worthy author, whose benevolent feelings and intelligent mind, impel him frequently to exert his talents for the benefit of Society. To improve the condition of his fellow beings, to exalt their character and augment the sum of human happiness, are the high objects of his constant and generous solicitude.

Edit. Am. Farmer.

Observations by A Member of the Board of Public Works of South Carolina, suggested by recent events, respecting a change of POPULATION and cultivation or production of new objects of industry, such as OLIVES, GRAPES, WOOL *and* SILK, *particularly in parts of that State.*

It has frequently been asserted, and probably with truth, that slavery is an obstacle to improvements and to the increase of the white population. The late distressing events in Charleston prove that it certainly is attended with considerable danger.

Very few persons in the Southern, as well as in the Northern states look upon it in any other light than as a great evil entailed upon us by our ancestors, and, like hereditary diseases of the human body, the cure is extremely difficult, and all that can be done with comparative facility is to administer palliatives. Some means at this time seem necessary to be adopted to check the growing evil, whether it is intended ever to suppress slavery totally, or merely to modify it so as to correct in a great degree the worst effects of it and prevent, if possible, the recurrence of the late disturbances. It is not intended here to discuss the subject of slavery ; but, taking the present situation of things as we find them, the question is, what is best to be done consistently with humanity towards our slaves, and our duty to ourselves and posterity ?

In order to answer this question, it will be necessary to take a brief view of the present state of things, considering at the same time the probable causes that led to the evil complained of.

There is not the smallest doubt that the condition of our slaves has been very greatly and progressively ameliorated since the revolutionary war. The spirit of philanthropy which has been more generally diffused with education, knowledge and milder manners, joined particularly to the self interest of the owners of slaves, have availed much. The introduction of labour-saving machinery has rendered the labour of the slaves much lighter than formerly, beside which they are better fed, better clothed and treated less harshly. If we compare the situation of our slaves with that of the labouring class of other countries, the former will be found, most undoubtedly, to have considerably the advantage. Whatever be the dearth of provisions, clothing, fuel, &c. they are sure to be abundantly supplied.—When they are sick, they have always good medical attendance ; they have no uneasiness concerning the bringing up of their children, and when disabled by disease, infirmities or old age, they are certain of their usual support without ever being under the necessity of recurring to mendicity. Their work is usually light, never above their power, and it is not uncommon to see them return home after having finished their day's work at 1 or 2 o'clock, and frequently even earlier than this. There are few or no instances of this among the poor class in Europe. The slave having finished his task is perfectly master of his own time: he sleeps, or he works in the ground allowed him for a garden, by which means he is enabled to procure a few articles of comfort. But whether he sleeps or works for himself, his mind is absolutely free from any kind of trouble either for the present or the future, for himself or for his children. In short he is fully satisfied that happen what may, he will be supplied with food and raiment, and he is never in danger of seeing the constable seize his bed for house rent, &c. Notwithstanding all this, we admit that slavery is far from being desirable, either for the slave or the master: Apathy, indolence, and want of energy and industry are alike, generally, the portion of both. Our house servants lead still an easier life. Their number is such in every family that each of them has but little to do, and here, perhaps lies a great part of the evil. Town slaves, whether mechanics, or house servants, are always very well fed and well clothed. They are selected from among the most intelligent, and, by the misplaced indulgence of masters, many have been allowed to learn to read and write. It is among these idle pampered fellows that we must ever expect to find discontent, and it is a well known fact that all the blacks concerned in the late attempt at an insurrection belonged to very indulgent masters, and were, almost without exception, fully in the enjoyment of their master's confidence. Many of them were, or pretended to be, very religious, and several were preachers. In the revolution of St. Domingo, it is almost without an exception also, that the most indulgent masters were the first sacrificed. Severe masters kept their slaves at work on the plantations a very long time after that country was in a state of rebellion and the negroes had been declared free by the French government.

From these indisputable facts it would appear that great severity is the surest means of keeping slaves in due subjection. But God forbid that such a plan be adopted ! Humanity forbids it, and when we have recourse to severe punishments, it ought to be only in obedience to the commands of the most imperious necessity.

Another great cause of discontent among the slaves in towns, and which it becomes our duty to remedy, is that many mechanics and others hire their own time from their owners. If they are intelligent and industrious, they undertake work on their own account, by which they make a great deal of money which they spend as they please, and by that means, create a great degree of jealousy among the others who are not allowed similar privileges. If they are vicious and ill disposed, it puts it in their power to do a great deal of mischief. Another source of disquiet among the slaves, one which perhaps justice and equity prevents our remedying, or which at least cannot be remedied but on the plea of expediency and the great law of nature, self-preservation, is the great number of free negroes and other coloured people who live among us. Some few of them are honest and respectable, but the greatest number are otherwise. Their mixing with our slaves renders them dangerous by their counsels and the example of the idle or dissolute lives which many of them lead. Would it not be well for our legislature to prevent the increase of their number by obliging all slaves who hereafter shall acquire their freedom, by any means whatsoever, to leave the state ?

Among the several means that suggest themselves to us, none seem so well calculated to answer the end in view as those by which the white population would be considerably augmented.—This, however, requires some exertions on our part and some money judiciously expended ; for as the tide of emigration from Europe does not set this way, it is necessary to give it a direciton. As for emigration from other states to this, we conceive it not so desirable as that from Europe, because, by it, we would gain population at the expense of our neighbours, and that by the other, not only the increase of population of this state would be effected, but also that of the United States. Neither would emigration from other states favor the plan here to be developed ; besides, we have not for the inhabitants of other states, except mechanics, inducements to emigration equal to those offered by the rich soil of the Western country.

All writers on political economy agree in one particular which, it is presumed, no one will dispute, and that is, that the power and wealth of states is always in proportion to their effective population. Therefore the great object of governments is, or ought to be to promote the population of their country in proportion to its territorial extent and resources, by introducing every article of culture, commerce or industry, suitable for them, that the people may be industrious, honest and happy, as well as numerous. We have here an uncommon inducement for endeavouring to produce such a state of things, and it is that were our state thickly inhabited by an industrious class of white people, our slaves would never think of making any attempt at an insurrection. Besides this, if it should ever be thought advisable to suppress slavery entirely and send away the emancipated blacks to where they might be independent and happy, if they would be industrious, we should have a population of whites ready to spread itself on our richer lands.

Supposing the state of South Carolina to contain sixteen millions of acres, (accuracy is not here essential) it is thought that nearly one half of it is pine barrens, sand-hills and other pine lands amounting therefore to about eight millions, out of which ought to be deducted about three millions for the water courses and our rich swamp lands bordering on them, and a small quantity of pine land of a better quality, which is presumed to be a full allowance. There remains then an extent of five millions of acres of pine barrens and sand-hills, which support at present but a very scanty population of such inefficient people, with some few exceptions, that it may not be considered as adding in the least to the wealth or power of the state.—The land itself is considered as of little or no value in its present state. Is this vast tract of country really of no value ? and is it not capable of useful productions and of supporting a more numerous and better class of people ? This is what we are going to examine.

In what precedes let it not be imagined that we intend to cast indiscriminately any censure on all the inhabitants of the sand hills. We know of some exceptions of honest and industrious people, which serve to prove that their lands have some value, as some of them live decently and raise numerous children ; and, were they taught the raising of productions better adapted to their soil, might be in comparative affluence.

Four different articles of first rate importance might be raised, it is presumed, in this tract of country, viz : *Olive oil, wool, silk, and wine.*

The Olive Tree is supposed not to thrive well at a considerable distance from the sea; but it does not require a rich soil, and it is probable would grow and thrive in the pine barrens in the lower part of the state. Particular and convenient spots of these lands might be selected for the purpose of making the experiment with great probability of success. The writer of this, for want of experience, can say nothing positive on the subject, except from what he has seen in countries where the olive is cultivated most successfully, and the writings of eminent authors. The celebrated writer on agriculture, the *Abbe Rosier*, says: " The choice of soil is in general very indifferent " for the olive tree, since we see it grow and " succeed well in *sandy*, *stoney*, *gravelly*, and " also in volcanic soils; it is even in those soils " that it yields the finest oil," &c. Is it not worth while to make some attempts at introducing the culture of so valuable a tree? Our most eminent statesmen have recommended it.

There is no kind of doubt but SHEEP would do well in this country, and the great demand for wool, particularly of the finest quality for the manufactures in the Northern States, gives us the greatest encouragement to raise this most invaluable animal as an article of commerce, the carcases of which would also be a most valuable addition to our meat markets. Many objections have been raised against the rearing of sheep, and those who have tried it have succeeded but imperfectly. It cannot be denied that sheep, like any other domestic animal, cannot be raised to advantage without having some care and attention paid to them; but the expense attending on these cares will probably always exceed the proceeds, so long as we keep them in such small numbers as has been done heretofore in this country. We find in the invaluable correspondence of Gen. Washington with Arthur Young and Sir John Sinclair, among others, the following observations: " Wolves are named as a motive for not keeping sheep; surely they cannot " be serious who urge it. They abound all over " Europe, in France and Spain, among the greatest flocks in the world; and no wolf could get " into my sheep houses, or at least I may say, " that nothing is so easy as to keep him out, even " of a yard. Dogs are also an enemy; but America surely has laws, as well as we, that make " every man answerable for the mischief done " by his dog. By night, if secure from wolves " they are secure from dogs; and by day, shepherds may have loaded fire arms to kill all " that approach. *While they are kept by* " *scores, such objections may hold good; but when* " *by hundreds and thousands, they must vanish.*" It is very evident that so timid an animal as the sheep must always be protected against its enemies, and that a fair experiment can never be made with them unless it is with a number competent to defray the expense of a shepherd. A shepherd with a pair of dogs, it is believed could be easily procured from Europe and kept here at a very small expense; as the wages of such a man are there very trifling. Hundreds of extensive flocks would find abundant and wholesome pastures in our sand-hills, and a sufficiency of cow-peas, &c. might easily be raised for their wintering.

This object, it is true would not directly tend to increase much our population, as very few persons are sufficient for a great number of sheep; but by adding considerably to our wealth and means of subsistence, would promote the intended object.

SILK is the next object to be considered. The mulberry tree, on which the silk worm feeds, is found to grow spontaneously all over the state, in our sand-hills as well as on the rich banks of our rivers. The imported seed of the European mulberry tree grows very well here, as the writer of this can prove by ocular demonstration, having upwards of one hundred of them. The climate is very suitable for the tree as well as for the worm, and our sand-hills are eminently calculated to raise great quantities of silk of the best quality; for it is found that, as the olive oil is of a superior quality when raised on a poor sandy soil, so is the silk produced from worms on the leaves of the mulberry tree that grows on a poor soil, found to be of the finest quality. A reference to the author already quoted, " *the Abbe Rosier*," will prove this satisfactorily.

It is to be observed that the raising of silk is very little or no obstacle to the cultivation of any thing else; for the life of the worm is only of 4 to 6 weeks, when the crop is completely obtained, and attention may then be turned to any thing else. To cultivate this valuable article with advantage, it would perhaps be indispensable to procure a few individuals from the South of France or from Italy, who, for this object, joined to some other, might be suitably settled in our sand-hills. The growing disposition for manufactures in the Northern states indicates to us what we ought to do to supply them with the raw materials they want. *Every effort of this kind tends to cement the bonds of our union, and this consideration, independent of any other, ought to induce us to avail ourselves of all the advantages which our soil and climate offer to our patriotism, as well as to our industry.*

That silk can be raised in this country cannot admit of a doubt; for it has repeatedly been raised in a small way, and many of us may remember a worthy member of the Legislature from Abbeville wearing in Columbia during the last war, silk homespun clothes. It is not within our reach at this moment to ascertain the amount of silk raised in other countries, either in quantity of substance or in its value in money; but we know it is very great, and it is undoubtedly a considerable source of wealth wherever it is raised in quantities, by affording employment for many poor people and furnishing materials for the richest manufactures.

The next and last object of culture recommended for our sandy lands, and probably the most important in every respect, is the GRAPE. Colonel John L. Sullivan, in his very valuable little essay on the " principles of political economy applicable to the public works, commerce and finance of South-Carolina," says, (page 8;) " The Southern states, whenever it is " for their advantage, will supply the rest of the " states (besides their present staples,) with all " the sugar, *oil and wine*, they may require.— " A report of the secretary of the treasury, a " few years ago, estimates the value imported in " one year, to have been, *in wine, eight millions* " *of dollars, in spirits, eight millions*," &c. and (in page 21,) " Those extensive tracts of sandy soil " may be found congenial to the vine, and *like* " *the same soils in the South of Europe, where* " *health reigns perennial, yield those mild tonic* " *wines so friendly to health, temperance and prosperity.*" Many other writers have expressed the same opinion, and it is a matter of surprise that the experiment has never been fully made. The writer has no doubt, from the attention he has, for some years past, paid to this object, that an experiment properly and fully made would be attended with complete success.

That Grapes will grow in our sand-hills is to be inferred from the following considerations: 1st. They do well in similar soils in Europe and other countries. 2nd. Our sand-hills abound with native grape vines, some of which may be usefully cultivated.——3rd. The cultivated wine is found to thrive well; not to grow with that injurious luxuriance experienced in richer soils, which is probably one of the causes of the rot. 4th. The climate is similar to those known to produce the best wines. Indeed it would be a very strange case (were it a fact) if the vine could not be made to succeed here. It is found to do well in all countries in similar latitudes, either North or South. Europe, Asia, Africa and South America produce wines, and why not South Carolina? It will be objected, perhaps, that the soil of our upper districts is better suited to the different articles of culture here proposed; but besides its being very doubtful, the intended object would not be answered. We certainly do not wish to discourage the introducing of any new culture in the upper districts; but we must keep in mind that the great object is to give value to an extensive tract of country which at present possesses none; increase the population, wealth and importance of the state by adapting different articles of culture to the different kinds of soil suited to them, and particularly in those soils that are not probably suited to the production of any thing else that has as yet been discovered.

With such prospects as are here exhibited, shall we not make an attempt that promises such vast resources, and advantages of every kind? The culture of the grape requires, or rather admits of a dense population. It has a tendency to diminish the practice of intoxication, by furnishing a lighter beverage for the working class of people; and the advantages of habits of temperance and sobriety are incalculable. By it a vast extent of country, now of no value, would rival in products some of our best lands. Who can foretell the value of these lands? Similar ones in other countries, when under this invaluable culture are, sold at enormous prices. What advantages in a political point of view! Nearly five millions of acres of land now unproductive and uninhabited, after a few years, bearing nearly the same prices as some our most valuable lands, and thickly settled by a hardy, industrious and honest people. What a source of revenue to the state, and what an efficient force for the defence and protection of the country? If we do not adopt measures tending to obtain some such ends, *how can this state keep pace with the progress of the other states in population and power?*

It is not intended here to induce a belief that every spot of these five millions of acres is suitable for grape vines. It is not so, nor is it desirable that it should be so. A considerable proportion must be cultivated in corn, peas, potatoes, &c. by the vine dresser himself for his support and that of his family. A considerable part of this land will probably never be in a state of cultivation; but it will answer for sheep-walks, pasturage for cattle, timber for building, fuel, &c. Admitting even that the population in this tract of country should not exceed, on an average, one person for every fifty acres, still it would form a population of one hundred thousand; but it is susceptible of maintaining many more, probably one family or more on every fifty acres. This country being settled by persons accustomed to labour and industry, in the collection of manures, and encouraged by the example of abler cultivators, would soon change the face of the country and render it comparatively fertile.

That emigration from Europe which is naturally directed to the Northern and Western states, may be partly diverted to this by offering advantages to emigrants. Almost any numbers of cultivators of the vine may be procured from different parts of France by defraying the expenses of their voyage, and by the promise of a certain quantity of land to each individual or family, after having worked a small number of years for the importer, or for him who would give them their lands, with the necessary means of forming each his settlement. Besides the cultivation of the vine, they would raise their own provisions, so as to be as independent as practicable.

A question here naturally occurs, which is: What will be the expense of forming such an establishment? This is, perhaps, not the proper place to enter into more of the many details of the plan; but the expense would necessarily depend on the number of families first brought in, and this to be sufficient to make a very full experiment, need not be considerahle; but, however the plan is carried into execution, it must be the work of time and of the efforts of disinterested patriotism or legislative assistance. A small number of families having been thus brought and settled; they would undoubtedly invite their friends to join them, and, in the course of time, when their successes could no longer be doubted, persons having capital to enable them to emigrate at their own expense, purchase land and form settlements, would come and add to the number as well as to the stock of industry and wealth of the state. Thousands of poor people in France, Germany, &c. whose industry, hard labour and the strictest economy can scarcely afford them the means of supporting life, would be happy to come here, and even supposing, (which is very improbable,) that they could not succeed in raising the vine to advantage; they would still be better off than in their own country, where they have no prospect of ever acquiring an inch of property. Here by their labour, they would be certain of their support, they would enjoy tranquillity and freedom, of which they can have no hope in Europe. They would be here in a country as healthy as any spot on earth; for this is most undoubtedly the character of our sand-hills. Therefore, even in the event of a very improbable failure of the principal object of culture, the others could not fail, and while we would have increased the wealth and importance of our state, we should enjoy the philanthropic pleasure of having bettered the condition of thousands of people, by placing them in the full enjoyment of all the advantages of a free government, viz: *Abundance, Liberty and Equality.*

Let us allow ourselves for a moment to indulge in the prospect of this state furnishing to the United States all the wines and brandies for their consumption. What enormous sums retained in the country, produced by the soil and the industry of its inhabitants! Have we not a right also to expect besides wine and brandy, raisins, almonds, figs and other fruit, which we now get at great expense, from the same countries from which we get our wines? Furnishing at the same time to the manufactures of the North, a great proportion of the wool and all the silk they may work up into cloths, stockings, ribbands, &c. Let us also view in the prospect, the great security we should enjoy as the natural consequence of so great an increase of our white population, and the great facility which this state of things would give us to abolish slavery, if ever it should be thought advisable to do so.—Such a state of prosperity is so dazzling that it seems as if we were basking in the sunshine of visionary schemes, rather than coolly and soberly deliberating on the means of attaining a practicable reality.

TURNIP CULTURE.

The following communication relating to the culture of turnips is from one who lately belonged to the fraternity of newspaper editors, but retired from the political arena and the perplexities and arduous duties of editor of a public journal, to enjoy retirement, peace and pleasure in the cultivation of his ample fields. As an agriculturist he is justly entitled to be ranked among the most useful of that valuable class of citizens. The county of Albany owes much to his spirited exertions, and his example in promoting the interests of agriculture. His farm, situated a few miles from the city of Albany, which when purchased by him a few years since, was merely waste land, and hardly considered worth cultivating, has become under his management and indefatigible industry, one of the best and most productive in the county. The vegetable raised by Mr. Buel to which his communication relates, is held in high esteem at Albany, and we doubt not those he proposes sending to this city will be soon disposed of after their arrival, of which we shall give notice.

To the Editors of the Statesman.

As you profess to devote a portion of your paper to the interests of agriculture, I take the liberty of communicating some facts relative to the turnip culture, which I have prosecuted this year to a greater extent than before.

My farm, on the Albany commons, is a sandy loam, and, so far as I can jndge, very much resembles the celebrated turnip soil of Norfolk, in England. The idea, which is prevalent in many places, that the turnip requires a moist, peaty, or very rich soil, is erroneous. It is equally an error that they will not grow on old lands, provided they have a dry and sandy soil. In Norfolk there have been raised fine crops on soils which were eight-ninths silex; and perhaps they do best where the sand does not constitute less than 70 per cent. of the soil. I find I grow the best crop on the sides and tops of my most sandy hills; while in places more moist, and abounding in more vegetable matter, they are of diminished size, ill flavored, and stringy. Hence it has become a primary rule in my practice to sow this crop upon my lightest soils.

For table use, *the later the turnip is grown the better.* Those late sown, are more crisp, juicy, firm, and better flavoured, than those which are maturing during the heats of September. I therefore sow late; the common sorts from the 25th July to the 6th August, and the Swedes early in July.

As a crop for cattle food, I have yet but little experience, except with the ruta baga. Of the utility and profit of these I am fully satisfied. They are raised as cheap as Indian corn. The average product is from 500 to 600 bushels. In a root cellar, or in piles of 100 bushels buried upon the surface of the ground, they keep perfectly well, and are fed without being cut to neat cattle, with as little labour as any food.

I have raised turnips five years, with uniform success, and *always as a second crop.* You probably recollect the high reputation they obtained in the Albany market as a table vegetable. This year I have grown seven or eight acres, of different kinds, viz. the flat red top and green top, the Norfolk white, the Aberdeen yellow, the globe and ruta baga; and they all prove excellent of their kind. The two first yielded at the rate of 760 bushels per acre. The whole were raised on ground on which I had previously taken (the same year) clover, rye, wheat, flax and peas. Most of the ground had a light dressing of manure, which was ploughed under, and the seed sown broadcast, and harrowed in. They were thinned and weeded with the hoe once only.

I contemplate sending a few hundred bushels to your market in a day or two, when I beg you will do me the favour to call at the boat and view them. I think they are not surpassed for beauty and goodness by any which I ever saw.

Your obedient servant,

JESSE BUEL.

BUTTER, CHEESE AND WINE.

Extract from the Report of Messrs. Bartlett and Harvey, to the Rockingham Agricultural Society, at the late Cattle Show in Exeter, N. H.

"The article of butter itself is deemed by your committee of so much interest to the citizens of New Hampshire as to have deserved much more consideration than it is in their power at this time to bestow upon it. The hills and vales of New Hampshire, in a climate where most kinds of grain can never be an object of cultivation, beyond the immediate wants of the farmer, suggest to us the propriety of studying the best means to avail ourselves of the profits of grazing.—Your committee will not stop to give estimates of the net proceeds to the farmers of the article of butter; for we need no stronger evidence in favour of it as a lucrative source of income, than the fact of the great quantity annually sent to market from this state, above that of domestic consumption.—A merchant of Boston, formerly a citizen of this State, whose extensive purchases and sales of this article gave him very accurate means of judging of the quantity of butter sent to that market from New Hampshire, estimates it at no less than six hundred tons a year.

It is not our present purpose to inquire, whether this *quantity* may not be greatly and profitably increased, but merely to suggest some considerations in relation to the immense saving, which may be made upon this in its *quality.* The gentleman above alluded to, who feels a deep interest in the welfare of his native state, has ascertained that of all the butter from New Hampshire sold in that market, about one third only is found to be of the *first* sort, one third *second* sort, and one third of the *third* sort, which reduced its worth two cents per pound on the "seconds," and five cents on the "thirds;" making a loss of more than *twenty-five thousand dollars* in *one season.* It is with propriety termed a *loss*, because this difference of *quality* arises principally from defect in the *manner* of *making* and *preserving it.* To this loss may also be added the delay and difficulty of finding a market at all. Any arguments against increasing the *quantity* for want of a market, surely do not apply to the improvement of the *quality*, and the latter may be accomplished with little or no addition to the expense. Your committee however by no means assent to the idea, that the want of a market can with any propriety be urged against increasing the *quantity* of our butter, provided it be of a proper *quality*. Some of our best butter has of late successfully entered in competition with that of other nations in the East India market; and the nature of the climate, where alone we must look for a market even of our own Southern States and Florida or South America, is such that none but the best butter preserved in the best manner can be offered at all.—Whenever we complain of the butter market, let us enquire how much of the butter is made of cream that has been kept until it is actually spoiled, packed up with a good proportion of all the butter milk; which the plentiful supply of dark and coarse salt cannot prevent from fermenting and becoming rancid—put into kegs or firkins so badly constructed and of so bad materials as to retain their contents only during the cold season, in a northern latitude. To improve our condition we must not shut our eyes to our faults and imperfections.

It is with regret the committee find themselves compelled to admit, that there is through the State a culpable negligence in the manner of making and packing butter; and it is still more painful to come to the conclusion which we cannot resist, that Rockingham, on this head, deserves more censure than any of her sister counties. While her population and wealth would justify us in looking for praise worthy examples in all the arts, the products of the dairies of Hillsborough, Cheshire, Grafton and even the yet almost unsettled Coos, give us specimens of skill worthy of imitation; and Strafford is now availing herself of the talents and assiduous zeal of her best citizens in agricultural improvements. It is not an apology for us to say that our soil is not *new*, that our fields and pastures are comparatively unproductive. The soil of Rockingham will compare with any county—much of it has an advantage in the facility of procuring *dressing* that no other section of the state can boast. So much of it as is in the vicinity of the tide waters has always an inexhaustible supply—to all parts of the county lime and plaster are easily and cheaply conveyed. Under the auspicies of this society, with the liberal patronage of an enlightened legislature, which we have no doubt will be extended to bring the aids of science to the labours of the husbandman, it cannot be doubted, that the time is fast approaching when a committee to examine claims for premiums on the products of the dairy, will not for want of competitors, be confined to the notice of a *few* specimens of very *small* quantities. It is, however, in the present instance due to the competitors for the premiums on butter to say, that in general the *quality* was such as to do them high credit for neatness, care and skill; and the committee regret that our markets so seldom, if ever, furnish like evidence.

The three samples, between which the committee found it most difficult to decide, were those of Mr. Bradbury Robinson, of Greenland, Mr. Biley L. Thing, of Brentwood, and Hon. Nathaniel Gilman, of Exeter. Mr. R.'s and G.'s butter was in cakes neatly pressed in moulds. Mr. Thing's closely packed in firkins.—They were all very perfectly manufactured, properly seasoned and of fine flavour. That of Mr. Robinson, while it was fully equal, if not superior to the other in every quality in which the palate was concerned, excelled in its colour and general appearance, and to him the committee awarded the *first premium*. To Mr. Thing, the *second premium* was awarded.

The only candidates for premiums on Cheese, were Miss Mary Adams of Londonderry, Mr. Benjamin Sandborn of Kingston, Hon. Nathaniel Gilman of Exeter, and Mr. John Gordon of Exeter. For the richness, fineness of flavour, and perfect state of preservation, the cheese of Miss Adams was considered best; and to her the committee award the *first* premium. The cheeses of Mr. Sandborn were deemed next in quality, and to him the second premium is awarded.—The other cheese offered were of good quality. The old cheese of Mr. Gilman was of very fine flavour, but the committee believe, from its hardness and dryness, too much power of the press was applied. While the curd is to be separated from the whey with the utmost exactness—it is believed to be best done not by the press. By cutting (not breaking) the curd and suffering it to drain a sufficient time, the whey will separate itself, and the press will be used only to give the curd its form and compactness; while if the curd and whey are, as too often happens, put together into the press; the force which expels the latter, carries with it the less solid though not less rich part of the curd. The cheese of Mr. Gordon appeared to the committee to be subject to the same objection; still buyers would have great reason to rejoice that our market was supplied with cheese of so good a quality as that of Mr. Gilman and that of Mr. Gordon. It would exhibit a wonderful improvement from its present condition. It is however to be hoped that such is not the deplorable condition of our dairies in the country, that only four persons make cheeses fit to be seen, and that either shame or fear ought to deter all others from exposing the product of their labour to the view of their neighbours.

In the examination of the wines, the committee bestowed that attention which so interesting an investigation required, and were aided by the *well timed opinions* of many *more experienced judges*, and a very general regret was expressed that *few samples* were exhibited. The committee indulge no extravagant fancies that our currant wine is to become a substitute entirely for those now imported. If it were of equal quality there is no pretence we could at once change a habit so fixed, or alter tastes, which have long been accustomed to particular wines, or what would be quite as difficult, to alter the *fashion* as to what we should use. Take from the *veteran* wine taster—who has every day puzzled his head either with the *wine*, or with *questions* concerning its age, or the particular side of the hill on which the grape grew, from which it was made—take from his eloqnent harangue upon his "London picked particular," it would be a proclamation of science to not a few fashionable dinner tables. Such revolutions are not be expected, and perhaps not at once to be desired, while for every gallon they pay a dollar toward the support of government. But it is to be hoped an increased manufacture of currant wine may diminish gradually the consumption of the more expensive imported wines, and supplant entirely the use of those of inferior quality. Large as may be the quantity at present of imported wine; not much less is that now sold for imported wine, compounded in this country of ingredients, some of which are very deleterious to health. If any persons have a taste so vitiated as to drink for pleasure this compound, which is almost the only *wine* found at the country shops, and also at most shops in sea ports, it is not of great importance what may be the result of the experiment. But it is known that wine is often prescribed by physicians, and there is too much reason to believe, that many unfortunate patients, whose constitutions might have withstood the original disease, have become victims to such poisons.

The currant grows almost spontaneously in this country; it may, with ease be produced in any quantity—the process of making the wine is easy and cheap, and its quality, while it is much above the inferior imported wines, has none of the deleterious properties of the manufactured compounds. In judging of its quality, we ought to consider what improvements age and fining, what selection of fruit, place of ripening, and mode of making, may add to it. Bestow upon it half the labour and care that the epicure deems necessary for his "Madeira," and it will then more richly deserve the appellation it has already received from a most distinguished patriot and naval hero, that of "excellent wine."

The samples of wine exhibited, were, of white and red, by Mr. Samuel B. Stephens of Exeter; and of red, by Joseph Tilton, Esq. of Exeter. The wine from the white currant, for body and flavour, was preferred; and the committee award to Mr. Stevens the premium. This wine had no distilled spirit mixed with it, and was made by the following receipt:

"To each gallon of clear juice was added two gallons of water, and to each gallon of the mixture was added three and a half pounds of white Havana sugar, and put immediately into a clean wine barrel; after it had done fermenting it was bunged tight."

The red wine of Mr. Stevens was made by the following receipt.

"To each gallon of clear juice was added two gallons of water, and to each gallon of mixture was added three and a half pounds of good brown sugar, and put into good barrels; after it had done fermenting, it was stopped tight. In February after it was made, one gallon of the best 4th proof Cogniac brandy was added to each barrel, and stirred up thoroughly."

Both these samples were of the vintage of 1821. Mr. Tilton's was of the vintage of 1820, and made in the same proportions but without the brandy. As the committee have no second premium to award, it is unnecessary to discriminate between these wines.—We venture to say that the friends and guests of the owners will not need the praise of the committee to do these wines ample justice. Mr. Stephens has, the last and present year, made from his garden five barrels of this wine. And those who need such inducement to commence the manufacture of it, should be informed that it is an article quick in the market for cash, at two dollars per gallon.

The present state of our machinery and process of making it, will, no doubt, attract the attention of the skillful and ingenious, and receive that improvement which it demands, and of which it is unquestionably susceptible.

UNINTENTIONALLY DEFERRED.

The following article on DYEING appeared about a month since in the New York Statesman, in reply to a letter contained in that paper, and which was republished in No. 31 of this Vol. page 247.—*Edit. Am. Far.*

TO MY BROTHBR DYER OF CINCINNATI, OHIO,

I was yesterday informed that an answer was forth-coming to some of my observations on dyeing, and in the Statesman of this day, it has made its appearance. It was some time before I could comprehend the meaning of the author, or find out what application it had to any thing I had written on the subject. On looking over my papers, I found my friend and countryman had very strangely mis-read my article on the subject of dyeing.

I would recommend my correspondent before he attempts to call another to account for theoretical errors, to learn first to read what that person has written on this subject, and then to understand what he is writing about himself.—My brother artist may be a good practical dyer in many of the colours, and be able to make woad, and no doubt would be willing to make money by both; this is very natural and very justifiable; but when he attempts to theorize on the art, it is another thing, and he must not be displeased if I inform him that he has herein displayed a total ignorance of the subject.—Whoever heard before of *woad being a mordant?* Let me advise him to search Bancraft, and tell me the next time he attempts to write, *what part of woad acts as a mordant.*

It is painful to me to have to expose the ignorance of a practical dyer, because he is a valuable citizen, and capable of rendering essential service to his adopted country, in as much as the art is at a very low ebb here. If money be his object, and he is in want of a good income and can bring proof of his practical talent, I will endeavour to find him one that will be to his satisfaction; but as the young and rising artists of this country are as liable to imbibe erroneous notions as they are correct ones, he will excuse me if I attempt to show him, wherein he has fallen into error on the theory of dyeing.

In the course of your criticisms on Hopson, you have the two following clauses referring to my opinion as addressed to the Editors of the Statesman.

"Your correspondent who has written on the *scarlet dye*, appears to be acquainted with only a part of the theory of that art, as two essential ingredients are not mentioned, one of which I have seen since my arrival in this country.—Your friend is also in an error in supposing he can render colour more brilliant by using steam, I have made use of steaming in dyeing for nearly thirty years, and am well acquainted with its advantages and disadvantages. It is a cheap and expeditious mode: but it cannot be used for fine colours, such as Saxon blue, green, pink, crimson, scarlet, orange, yellow, and all other delicate colours, *but at the expense of their beauty*."

"All dyers should know, that when bright colours are wanted, the first step to be taken is to clear the water of all mineral and animal substances. This is all that is necessary to prepare the liquor for any bright colour; but if raw water be added, or steam suffered to flow into the vessel, the beauty of the colour will be destroyed, in proportion to the quantity admitted."

In this short compass you have included more errors than could be explained away in fifty pages of close letter-press. I cannot credit that the essay was written by yourself, you most assuredly could not, had you been capable of writing it, have issued such a parade of nonsensical and contradictory theory. The next time you employ a substitute let me beg of you for your own sake, to look out for some person who will express your thoughts more consistently.

I have never given any receipt, or described any mode of dyeing scarlet after the plan pursued in England, with cochineal. I first gave an account of a new mode discovered by me in the years, 1807, 8 and 10, with nitro muris tartrate of potash, and of course all other ingredients commonly used were left out, excepting the colouring matter, and if you will take the pains to look over that article again, you will find I stated that I never had an opportunity of bringing this to perfection. In another paper to my very liberal friends, Messrs. Carter and Prentiss, I gave the process which was first discovered by your humble servant, of dyeing scarlet with the colouring matter of a shell lac, or what is called lac lake, and here also the process is very different from that of dyeing with cochineal. In that essay, I stated that the receipt was lately obtained from England; and, for your further information, let me inform you that it was copied from the specification of the patentee, so that if it be erroneous, you may know where to attach the blame.

In order to elucidate the subject of the first of these essays, on the use of nitro muris tartrate of potash, I merely mentioned that in the old process the "aqua regia nearly saturated with tin, was used in the proportion of three pounds to one of cochineal." That "the materials were added whilst the liquor was boiling, the acid first, and the others in succession. Soon as the cream of tartar is precipitated into the liquor, a curdling appearance is immediately formed, &c."—This is the nearest approximation I have made, for giving a receipt for the usual scarlet dye, and as it was given to throw light on another process, it could not be considered as a receipt.

It seems I cannot be "acquainted with the theory of dyeing because I left out two of the ingredients used in producing the colour, one of which you have seen since you have been in this country" when the subject did cause me to speak of them. The practice and theory is here strangely jumbled together.—And is it really true that you have seen one of the ingredients in this country that is used in producing scarlet?—this is truly surprising! and you must think so, for it appears to be a secret of too much value to be exposed. I should not wonder if you had met with black oak bark, or some orange coloured root in the woods that was a substitute for tumeric, as these are often used in England; but if you have I would advise you to seal up your lips hermetically and never let it escape, for it is of too much consequence to be given away!!! If you should remain in that country until next August, and put on your spectacles, and search the plants in the neighbourhood of Cincinnati, you will no doubt meet with the *cochineal fly in great numbers*, it being there every year about that season; but should you make this discovery I hope you will keep it close, as you may be much injured by making it known!

I am "also in an error in supposing I can render colour more brilliant by using steam."—In removing from the state of New-Jersey to Brooklyn in the state of New-York, in June last, some of my papers got mislaid and I cannot find two of my first essays; but this I am confident of that no such assertion was ever made in any of them—as far as I remember, I asserted that many of the bright colours could not be done with a steam heat, as it had been found only to paint them, by which I meant that the dye did not penetrate through the goods, and that on this account those who used steam usually had fire-places under their boilers to employ a fire-heat when it was wanted. This has ever been my impression until I was informed by Messrs. Haights', who are inferior to none in the theory and practice of dyeing, that some beautiful reds and other colours, I saw in their dyeing house were done by steam-heat. I must acknowledge that this information has, at any rate, suspended all the decisive objections I had previously entertained to this mode of colouring, and if it should be found to answer as well upon cloth as it has done upon their yarn, there cannot be a doubt of its being capable of producing any and every colour in the greatest possible perfection.

"All dyers should know that when bright colours are wanted, the first step to be taken is to clear the water of all mineral and animal substances."

I should like to know of this writer by what means he should get rid of mineral substances from water? would he pass it through quick lime or through what? He will oblige me by explaining the term mineral, is it of a metallic, earthy, or of a saline nature, and what effect does his metallic substance produce on fine colours? It is necessary to have an answer to these queries before I can judge of the correctness of his position that it is necessary to remove it.

"But if raw water be added, or steam suffered to flow into the vessel, the beauty of the colour will be destroyed, in proportion to the quantity admitted."

This is the last article I shall have to answer, and it caps the climax of the whole. Can dyeing go on without letting *raw water* run into the furnace many times in the course of the day? In dyeing of scarlet the liquor is so much wasted by winding the cloth into a buck of *raw water*, that during a day's working it has to be filled up one third or more with *raw water*, eight or ten times, and without any thing being added to correct its *rawness*. If nothing is wanted to be removed from water but mineral and animal substances, how can this be better effected than by distilling the water? Here all the alleged impurities must be gone, every thing must be in the best state for colouring, and yet this water will not produce good colours.

In a few days I shall answer the queries that have been put relative to other subjects, and although I have felt an irresistible propensity to ridicule some of his opinions, he will not find me deficient in giving him the best advice, or otherwise in assisting him in any way that can best promote his interest; but I would advise him in future to deal in plain matter of fact, and not to attempt that which is beyond his reach.

HOPSON.

Letters on the Poor Laws, originally published in the Petersburg Intelligencer, and addressed to the Representative of that town.

LETTER I.

Sir—I do not know if you have ever seriously considered the subject upon which I am about to address you, but as you are a general reader, I am confident it cannot have entirely escaped your notice. The great and rapidly increasing burthen of the Poor Laws demands some alleviation; and he will deserve well of his country who arrests the progress of so considerable an evil. I am aware that a proposition, to abolish the whole system of the Poor Laws, may subject its advocates to the censure of all those kind old women whose heads are as tender as their hearts—and that much popularity, with the unthinking, must be sacrificed by the first attempt to abandon the Poor to the 'hard charity of an unfeeling world;' yet I am so convinced by arguments, which are doubtless as familiar to yourself as to me, that every permanent provision for paupers necessarily increases their numbers; that I am anxious, by means of these short letters to you, to lay the reasoning upon their subject before that portion of our fellow-citizens whose want of leisure has prevented their attention to this branch of political economy. The very general and profound ignorance of the great body of our people upon this subject is not less a matter of astonishment than of regret; and goes far to invalidate the truth of our once proud assertion, that the people of this country, in whatever related to their rights or interests, were more enlightened than those of any other nation. It will not be expected that new arguments can now be advanced to maintain propositions, which more than twenty years of continual opposition and attack have not been able to destroy or even to check in their gradual progress to general reception. But many persons may read a short article in a newspaper, who have not taken the trouble, nor spared the time to investigate the subject in a more elaborate work. My object will be gained if a spirit of enquiry should be produced among our citizens, which must inevitably result in the conclusion, that Poor Laws independently of the burthen they impose upon industry, increase the very misery they were intended to alleviate. If this result be once generally attained; if the great body of the people be once fairly convinced of the true tendency of the laws to which I object, if they be satisfied that they have hitherto only inflamed a wound which they attempted to heal; it would not then be, (as it certainly would prove now,) an act of political martyrdom to propose to the general assembly a repeal of the whole system.

The charge of being uncharitable is readily imputed, and believed without much investigation; but even when undeserved, it is among those which are most irksome in sufferance.

should very unwillingly incur such a charge, with a consciousness of its injustice, at the commencement of my task; for, exclusive of any personal distress at being so regarded, the arguments of a selfish and unfeeling man are always listened to with suspicion and often treated with contempt. But it will not be difficult to prove that there is not only no exercise of individual charity in any compliance with legislative provisions for the poor; but that such provisions tend directly to paralize, and eventually to destroy those finer feelings which are the source of all real benevolence.

True charity is an ample, but a costly cloak for many human frailties; and all of us are anxious to possess it, while many are unable, and more, I fear, unwilling to come up to its price. A flimsier stuff, then, must be procured, which will serve as well for a covering, look as well at a distance, deceive the multitude, and at length deceive ourselves into a belief that we have discovered a sufficient substitute for that which is said to be above all, and without which all the rest is of no avail. Hence the self complaisance with which men flatter themselves that one of their most imperious duties here has not been neglected, because the legislature has established Poor Laws; and hence the indifference with which they pass by objects of the most abject poverty and extreme distress, with the contented declaration that they have paid their poor rates, and that the doors of the poor-houses are open. As far as regards the merits of the donor, that which is unwillingly given would be better withheld; since it might be applied to some useful purpose; and the useful application of wealth is in itself highly meritorious and praiseworthy. But that which is forcibly abstracted from us by a superior power, although employed in the relief of misery, can be no more imputed to us for righteousness; than the relief bestowed by Gil Blas on the beggar, who solicited his commisseration with a musket at his breast, can be called charity. The 'quality' of charity, like that of mercy, is not 'strained,' as we cannot be merciful from the hope of gain, so neither can we be charitable from the fear of loss; the open hand must have been relaxed by the melting heart, not forced to expand by the gripe of the law. And yet how many are there who arrogate to themselves the praises due to benevolence, because the wealth of their county enables them to support their poor more liberally than their neighbors can afford, even while they complain aloud of the operation of laws which they dare not repeal; and curse in their hearts the expense of maintaining those, whom, in most cases, idleness, dissipation and profligacy have reduced to pauperism. But, even if it could be supposed that all which is thus extorted by the law, for the support of paupers, was freely given, yet would our title to be called charitable, or to inherit the blessings pronounced upon him who giveth his all to the poor, be extremely problematical.—To give money carelessly and without regard to the object on whom it is bestowed may be profusion and extravagance, but is not generosity or benevolence. And who are those with whom our poor houses overflow? The decayed artisan?—No! his pride will not permit him to come there, and his probity has made him friends elsewhere. The worn out laborer? No! in his youth he reared a family by his industry, and they now repay the obligation. The children of virtuous poverty? No! their parents, in this country, are yet generally able to maintain them. Except then, a few orphans and occasionally an insolated being, whom disease or accident has disabled, the inmates of our poor houses are the offspring of vice, or the dregs of debauchery. Not only to support idleness and vice, but to hold out encouragements to their increase, is not charitable, but foolish and wicked. And do we not encourage vice by declaring that we will support the vicious whenever their misconduct reduces them to want? Should any person go to another, and say, "Sir, you seem to be fonder of ease and pleasure than of toil and care, live freely then, take no care for to-morrow, and if at any time, disease, old age and poverty overtake you, my purse is at your service; I am not rich indeed, but it may perhaps suffice us both,"—would you call such a man charitable, or prescribe Hellebore and the straight waistcoat for his madness? Yet this is the charity of the Poor Laws, offered not to an individual, but to the whole mass of the people. And the time may come here, as it has already arrived in other countries, which groan under this system, when, unless the only remedy is applied, and speedily, more than half the profits of industry must go to the support of idleness. In my next letter I propose to prove that Poor Laws do actually check charitable intentions, and are unjust inasmuch as they bestow that relief on vice which they snatch from virtue.

I am, with respect, &c.

LUCIUS.

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FOR THE AMERICAN FARMER.

HARLEM NURSERY.

It is with peculiar satisfaction, that we find several gentlemen are engaged in the establishment of a *Nursery*, of the different kinds of *good fruits*, at Harlem, the seat of Thomas Edmondson, Esq. within the limits of this city, as lately extended.

This institution will be matured, without loss of time. The convenience of the situation to persons of this neighbourhood who may wish to procure a supply of standards to enrich their farms and gardens, will be such, that we presume all may participate in its utility, so as to remunerate those who have embarked in this useful undertaking—one, so long desired in this section of the country.

We, therefore, wish to suggest, that it would be rendering an essential service to the community, as well as to the individuals engaged in the establishment, if gentlemen living in different parts of this country, who have several kinds of good fruits, and perhaps some very little known to the public, would be so obliging as to forward grafts by early conveyances to the Editor of the Farmer, who will deliver them over to the *nursery men* for cultivation. It is presumed that a very valuable collection may be obtained and perpetuated in this way, provided timely care be taken by those who have them in possession. They will be thankfully received, and particular attention will be paid to the several selections that may be forwarded.

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TALE OF THE MAHOMETAN AND HOG.

THUS says the prophet of the Turk,
"Good musselmen, beware of pork:
"There is a part in ev'ry swine,
"No follower or friend of mine
"May taste, what'er his inclination,
"On pain of excommunication."

Such Mahomet's mysterious charge—
And thus he left the point at large,
Had he the sinful part express'd,
They might with safety eat the rest:
But, for one piece they thought it hard
From the whole hog to be debar'd;
So set their wits to work to find
What joint the prophet had in mind.
Much controversy therefore rose;
These chose the back, the belly those:
By some 'tis confidently said,
He meant not to forbid the head:
While others at that doctrine rail,
And piously prefer the tail:
Thus, conscience-freed, from ev'ry clog,
Mahometans eat up the hog.

You laugh—'tis well. The tale apply'd
May make you laugh on t'other side.
"Renounce the world," the preacher cries,
"We do," a multitude replies;
While one, as innocent, regards
A snug and friendly game at cards:
And one (whatever you may say)
Can see no evil in a play.
Some love a concert or a race,
And others shooting, or a chase.
Revil'd and lov'd renounc'd and follow'd,
Thus, bit by bit, the world is swallow'd!
Each thinks his neighbour makes too free;
Yet likes a slice as well as he.
With sophistry their sauce they sweeten,
Till quite from tail to snout 'tis eaten.

Editorial Correspondence.

ARRACACHA, ZANTE-CURRANTS, FLAX DRESSING MACHINES, CIDER MILL AND PRESS, HARD SOAP, AND HUBER ON BEES.

W——, Pennsylvania,

"I felt obliged by your kind offer of sending me a root of Arracacha, which I should at the time have accepted, but I expected to receive shortly a supply of the article (which has not yet arrived) from a mercantile friend in Philadelphia, whom I had commissioned to procure some for me. I have also instructed the same person to obtain for me, if practicable, some plants or cuttings of the Zante Currant, an article of much consequence in domestic economy, and which, I think, may be cultivated very successfully in this climate, if care be taken to protect the plants regularly from the inclemency of our winters, and which might be accomplished with very little trouble. My friend reports unfavourably of his endeavours to procure them, saying that he can meet with no Captain that will interest himself in the matter, but he will continue his exertions, and probably you may have the means and feel a desire to acquire the plant, so that I hope the experiment will ultimately be tried by some one of taste and spirit in horticulture.

With respect to the flax machine sent to me from England, invented by Mr. Salisbury, I have been much disappointed—instead of finding it sufficiently effective in the natural operation of dressing flax, as, from the promulgated reports of it by the Philadelphia Agricultural Society, I had reason to expect, I find it altogether inefficient, and a mere bauble. Three times more can be accomplished by the common brake, than with this new machine, which is apt to tear and injure the Flax. I had two of the machines sent to me, and if you should wish to see one, I will present you with one of mine. Considering the very great difference, that exists between the two countries, in the circumstance of manual labour, I should say that the English hand machines generally are not suitable for this country. Salisbury's have been used in houses of industry, where constant employment is the object, and certainly his machines are well calculated for this purpose, as they will keep a person employed three times longer than would a machine more efficient.

My cider mill and press are not, as I told you that I expected to find them, in one machine, but separate—the principle of both is common. The press is worked with a wooden screw and lever, and the mill consists of a frame of wood, on which are placed two wooden cylinders parallel to each other—having iron teeth studded over them, and projecting about five-eighths of an inch from the surface of each cylinder, and so placed as to pass between one another in the rotary motion given to them by the handles which are affixed, one on the end of each cylinder, but on opposite sides of the frame. A wooden trough is placed on top of the frame, and immediately over the cylinders, so that the apples when put therein, fall on the revolving cylinders, which crush them, and the contents (the liquor and pomace) pass through into a large tub placed underneath. E. K. tells me that the only difference he has observed between this and the Devonshire apple mills for sale in Balt. at Thomas's, consists in the cylinders of the latter being of cast iron—I have therefore thought it unnecessary to send you any sketch of my mill, but should you desire it, I shall with great pleasure comply. I have not yet put mine into operation, but I am told that a man and boy may grind 100 bushels per day with it.

The receipt for soap making, with which you have favoured the public in your Journal, Vol. 4, No. 2, page 14, is an excellent one, and has enabled us to supply ourselves with as good hard soap as we can wish for.

On the management of Bees you have favoured us with extracts from the British Apiarian;—I presume you have seen the little book of Huber on bees, an author, who, notwithstanding the sneers and criticisms against him, I will venture to say, has thrown more light on this particular subject of natural history, than any one before or since his time. Several subsequent writers have presumed to question, and sometimes to contradict his assertions, for want of that peculiar skill, address and perseverance which belonged to Huber and his assistant. But any gentleman who hath both leisure and inclination to acquaint himself with the admirable order and economy of Nature in this emblem of industry, should consult Huber, and may safely take the results of his experiments as his Code. C. S.

IMPORTED CATTLE.

Extract to the Editor, dated Versailles, Kentucky, Nov. 27th 1822.

You sometime ago, requested information of all the cattle which have been lately imported to the United States.—I am in possession of two bulls of the short horned breed; one of them is of the improved milk breed—they were imported by Mr. James Prentiss, of Lexington, in the fall of the year, 1817. Messrs. Cropper, Benson, and Co. of Liverpool, had them purchased and shipped on board the American ship Sampson, Cap. Boyle, to the care of C. F. Price, Philadelphia—the order was for two of the best young bulls in the kingdom, without limit as to price—and Messrs. C. B. and Co. write as follows:—"We have now to advise that we have through a friend of ours, who is a very great judge in these matters, procured two bulls, one of them his own breeding, out of the celebrated Durham improved breed, and the other which he travelled some distance to procure, is of the improved milk breed.—One of them is ten months old, the other is rather older than we could have wished, but we were strongly recommended to take him; he is nearly two years old.—We have paid 50 guineas for each of them—they might have been procured for much less money; but not of such character as we have thought ourselves justified in sending—and we have therefore made use of the limits the more freely."

The misfortunes of the importer made it necessary to sell them upon their arrival here, and my brother, who lives in the neighbourhood of Lexington, and myself, purchased them at $750 each.—We have about 200 of their offspring with which we are much pleased—and we are now raising about 100 of their calves a year.

I am, Sir,
Your obed't serv't,
NATHANIEL HART.

PIGEONS:

HOW ARE THEY TO BE DOMESTICATED.

District of Columbia, Nov. 10th, 1818.

DEAR SIR,

After preparing what I deemed a suitable apartment in the South gable-end of my stable, I have made repeated attempts to raise the domestic pigeon, but hitherto without success.—I commenced by procuring a pair of squabs from my neighbours—these I regularly fed, watered and gravelled—they appeared domesticated, descended to the yard, fed with the fowls, and would almost come to the call of my servants; they however took French leave in about ten or twelve weeks. I then procured double the number, cut their wings, and fed them as before—they continued with me for three or four months, and followed the flight of their predecessors. The last attempt, I not only succeeded in raising two or three pair, but was favoured with the return of most of the former absentees—this gave me hopes of final success, but it was of short duration—they seemed to congregate but to agree upon their final departure, which took place the last week, since which, they have not condescended to "rest a foot" near their former dwelling.

Should any of your goodnatured fatherly or motherly correspondents understand the œconomy of, or be possessed of the management of these generally considered domestic birds, I hope he, she, or they will impart it through the medium of your invaluable paper, and thus gratify a

LOVER OF SQUABS.

THE FARMER.

BALTIMORE, FRIDAY, NOVEMBER 22, 1822.

PRICES CURRENT.—CORRECTED WEEKLY

White wheat, $1 35 to 1 40—Red do., $1 22 to 1 27—Rye, 70 to 75 cts.—Corn, 62 to 65 cts.—Oats, 35 to 40 cts.—Flour, best white wheat, $7 50—Superfine, $6 25—Fine, $5 87½, Wharf prices—Beans, $1 25 to 1 37½—Peas, black eyed, 70 to 75 cts.—Clover seed, 9 to $10—Timothy seed, 4½ to $5—Whiskey, from the wagons, 35 to 36 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Herrings, No. 1, $3 62½ per bbl.—No. 2, $3 37½—Shad, No. 1, none—No. 2, $6—Bacon, round, $10 to 11 cts.—Hay, $17 per ton—Straw, $10 50 to 11.

Maryland Tobacco continues very dull—prices have not varied for several weeks past.

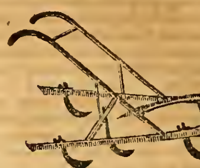
THRESHING MACHINE,

FOR SALE.

An English Treshing Machine, of the most approved construction—it was imported by the late Mr. Dawson, and has never been used—it is offered at the low price of $300, as the owner has no use for it. Enquire at the office of the American Farmer.

JOSEPH T. FORD,

MANUFACTURER OF IMPLEMENTS OF HUSBANDRY,
Pratt-st. Bridge, Jones' Falls, Baltimore,



Has on hand a large and complete assortment of *Ploughs, Harrows, Cultivators, &c.* as follows:

SMITH'S PLOUGH.

No. 4,	a four-horse Plough	$17 00
3,	three-horse do.	14 00
2,	two-horse do.	12 00
2,	common size do.	10 00
2,	light do.	8 00
2,	do (with points,)	7 00
1,	do.	7 50
0,	do.	6 50

PEACOCK'S PATENT PLOUGH.

No. 11,	large Plough	$18 00
9,	do.	16 00
8,	do:	15 00
5,	do.	10 00
4,	common do.	9 50
3,	do.	9 00
2,	do.	8 00
1.	do.	8 00

Dagon or Carey Plough, Corn shovel Plough, and Substratum Plough;

Which latter is used for loosening the subsoil after the common plough; and it is believed, that great advantages may be derived from it, as it will afford a greater depth of tilth to hold moisture and nourishment for the roots of plants, &c.

HARROWS.

Hinge Harrow	$12 to 18
W. do.	10 to 15
Diamond Harrow	8 to 15
Common corn do.	6 to 10
CULTIVATORS, of all sizes and constructions, at from	$4 to 12

PATENT HAY AND GRAIN RAKE,

(Of which J. T. F. is the sole maker and vender for Baltimore County.)

This rake is drawn by one horse, and has the reputation of accomplishing as much work as ten or twelve men, and much better than is usually done with the hand-rake. It possesses great advantages over the common horse-rake, equal to the saving of one-half the time; because, with this rake, the horse proceeds continually on, the hay or grain being discharged at pleasure, without any stoppage or impediment.

J. T. F. has always a large assortment of wagons, carts, drays, Jersey-wagons, used by families, light-hand carts, wheel-barrows, with suitable harness for all or any of the before named articles.

☞ Orders from any section of the country, promptly attended to.

Baltimore, November 5th, 1822.

PUBLISHED BY JOHN S. SKINNER.

AGRICULTURE.

PROCEEDINGS OF THE MARYLAND AGRICULTURAL SOCIETY—No. 3.

On Wednesday the 6th of November, being the first Wednesday in the month, in the year 1822, the Maryland Agricultural Society met at Easton, pursuant to its adjournment from Baltimore, and sundry members attended; but for want of a sufficient number to form a quorum for the transaction of business, and to permit the society to attend the Cattle Show and Fair on the following day, the members present adjourned to Friday the 8th of the month, then to meet at the Court House at the hour of ten o'clock in the morning.

On Thursday the 7th of the month, and the first day appointed for the exhibition, the Committee of arrangement and such of the judges, previously elected and notified, as were in attendance, assembled at half past 9 o'clock, at Lowes' hotel, according to the rules published for the occasion; and the judges, attending from different districts of the State, were introduced to each other, and associated for the respective objects of their appointment. The Chairmen were furnished with the class of animals and articles about to be submitted to their judgment, and with a list of the persons composing the judges of the several classes thus organized; and addressed by the Committee upon the nature and importance of their trust as connected with the best interests of Agriculture, and upon the manner of performing this service, and reporting their decisions. The Committee and the Judges, accompanied by the members of the Society, and a numerous concourse of citizens, proceeded to the Field of exhibition. Intelligent farmers from most of the counties on the Eastern Shore, many gentlemen of the first consideration in the civil departments, and several respectable agriculturists and graziers from the Western Shore, and from the neighbouring states, attended, and honoured the meeting by their presence. Among them we observed with pleasure three Ex-Governors of the State, some members of the Senate of the United States, and the presiding Officer of that dignified body, deservedly distinguished for his ability and patriotism.

The spectators in groups and companies, as it suited their pleasure, proceeded round the inclosure and examined the animals exhibited; and although the Committee had prepared nearly eighty convenient pens for their accommodation, it was found necessary, from the number entered with the Secretary, to exclude all horses, mares, jacks and mules from the stalls, and to reserve them entirely for the cattle, sheep and swine These fine animals thus excluded from the pens were, however, brought out to the field at the appointed hour, and displayed to great advantage. The number and quality of every kind which appeared to the spectators; the proud parade of implements of husbandry, and the remarkable exhibition of many fine articles of household manufacture, were viewed with equal surprise and satisfaction: It was the first attempt of this nature on the Eastern Shore. The notification of the Cattle Show was first published on the 13th of August; and the real objects of the Society in proposing it were not, until much more lately, properly understood by the Body of our farmers. Such a scene was not therefore anticipated; and in truth it surpassed the reasonable calculation of all. It was highly pleasing to observe the serious and earnest regard with which the attending farmers viewed and examined every thing before them—the fine horses, mares and mules as they alternately passed along—the beautiful cattle of late importation from abroad, and the mixed descendants of these—the effect of care and attention bestowed upon our own domestic breed—the fine display of sheep and swine—the nice construction of improved implements and the excellence of their performance—the interest taken by citizens of the first character for wealth and education in the concerns of agriculture—the opportunity and material desire of making these concerns a common cause: all these were seen and observed by every individual; and it cannot be questioned that the effects impressed upon the mind by those observations will have an early tendency to produce important changes in all those departments of husbandry, in which the want of knowledge, or the force of antient habits, has occasioned error. These are the effects which the Society propose by these exhibitions, and we trust they will not be disappointed. They serve to excite a spirit of inquiry, to lead to useful experiments, to remove prejudice, and to produce conviction. The present occasion appeared to give satisfaction in every respect. The desire to see and understand was universally prevalent. There was sometimes a pressure from the crowd; but it was the pressure of curiosity and not of rudeness or impertinence: mutual respect was shown to one another, and no disorder was observable in any quarter of the field. The citizens in general were so much engaged with the various and attractive objects of the exhibition that the booths of entertainment placed at a convenient distance, were frequently unoccupied.

Mean while the judges proceeded to examine the classes of animals and articles respectively committed to their charge, and made minutes of the merits of each preparatory to their reports.

The members of the Society were exceedingly gratified with the arrangements of the Committee, and with all the branches of the exhibition; and having indulged themselves in the interesting scene around them until the hour appointed for their dinner, they repaired with the distinguished strangers to the room in the Hotel prepared for their entertainment, and partook in harmony and pleasure of the sumptuous repast provided for them by the landlord.

It may be added to the close of our remarks upon the proceedings of the day, that many of our farmers, possessing very good cattle and sheep, were restrained from bringing them by a belief, that they would appear to no advantage in consequence of their thin condition, caused by the dryness of the preceding season; and others were prevented by an unwillingness to put them in comparison with superior animals of high character, which were expected at the show. But upon another occasion there will be a better understanding of the designs of the Society; and the encouragement derived from the liberal conduct and good will of the attending members, and from all the transactions of this auspicious day, will produce the happiest results. The display of a future exhibition, there is every reason to believe, will prove that the Eastern Shore, among other advantages, possesses an abundant stock of valuable animals, and can annually supply a Fair, no less profitable to its inhabitants than deserving the attention of the graziers and butchers who provide the markets of the larger cities.

On Friday the 8th of November, in the same year, the Society met at the Court House in Easton, at ten o'clock, according to its adjournment, and many members attended.

The President of the Society took the chair and organized the meeting.

The decease of Mr. John E. Howard, Jr. the late Secretary of the Society, being announced, a motion was made and seconded that the members proceed to fill the vacancy occasioned thereby. It was so resolved; and Mr. James Howard, of Baltimore, was unanimously appointed Secretary.

Mr. Ezekiel Forman, the late assistant Secretary, having resigned that office, the members present proceeded to supply that vacancy; and Mr. Samuel T. Kennard, of Easton, was thereupon unanimously elected assistant Secretary. He was notified of his appointment and consented to accept of it.

A motion was made and seconded, that a committee of five members be appointed to consider the expediency of an application to the General Assembly, for an act of incorporation, for the advancement of agriculture and for the more effective regulation of the Society; and, on consideration, the motion was adopted; and it was resolved, that the President and Vice President do appoint the said committee, and that the Committee make a report on this subject at the next meeting in Baltimore.

The Society then proceeded to the field of exhibition, to receive the reports of the several judges, appointed to examine and judge of the merits of the animals and articles exhibited; and to distribute the premiums awarded according to their respective judgments.

And having there assembled, the President took the station assigned to him; and the Chairmen of the respective bodies presented in alternate order their several reports and judgments, having first openly read the same; and the President on receiving them, one after the other, in an obliging manner delivered the respective premiums to the successful candidates, agreeably to the award of the judges.

A motion was then made and seconded, and it was thereupon unanimously resolved, that the thanks of the Society be presented to Mr. Samuel T. Kennard, a member of the Committee of arrangement, for the assiduity and marked attention with which he had executed the agency entrusted to him by the said Committee, in preparing the pens and stalls for the accommodation of the animals and articles exhibited, and in so arranging their plans and designs as to make the exhibition peculiarly convenient to the members, and satisfactory to a numerous assemblage of spectators.

The judges on Domestic Manufactures, having recommended to the Society, that certain premiums, which remained unappropriated, should be presented to the owners of certain articles, which, though a little inferior to others of the same kind, to which they had awarded premiums, were truly meritorious and entitled to much distinction: it was, on motion, unanimously resolved, that those premiums be presented to the candidates as recommended by the judges—and they were delivered by the President accordingly.

No further business being laid before the Society, they adjourned to the first Wednesday in June next, then to meet in Baltimore.

Test.

SAMUEL T. KENNARD, *Assist. Sec'y.*

The several Reports of the judges referred to in these proceedings are as follow:

NO. 1—ON HORSES AND MARES *

The Judges composed of Robert Wright, Edward N. Hambleton, Elisha Wilson, Daniel Sulivan and James Denny, who have been appointed to examine and judge of the merits of the Stallions and Mares exhibited for premiums and for show,

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* *Some of our Farmers are not perfectly satisfied with the report of the Judges on the subject of Horses. These gentlemen appear to have considered the excellence of horses to consist al-*

Report, That they have carefully examined the several Stallions and Mares so exhibited, and with great satisfaction remark, that the field presented a fine stock of these animals.

We see, on the North and South, with pleasure, the states of New York and Virginia about to settle the preference of their favorite Stallions, by the infallible experiment of a contest on the turf. We are, *by view*, to form the best judgment in our power.

By antient history we are taught the great respect paid to the Horse. On one occasion, his apparent sagacity pointed to the selection of a King; and at a later period, another monarch, relying on the strength and fleetness of this noble animal, in a case of great emergency, exclaimed, "My kingdom for a Horse." Their inestimable value in forming the cavalry of the country, that important branch of the army, for the protection of the constitutional rights of the people, is tested by the practice of all the nations of Europe, where the turf has been regarded as the best nursery for fine horses, and their trials of speed and bottom in the course, the best evidence of their superior excellence.—We regret that this practice is not more frequent in our own country, as it would promote the efficiency of the national cavalry, which we consider a material portion of the national defence.

To the Honorable James Nabb, for his Horse Chance-Medley, by Chance, out of a Medley Mare, we award the first premium of $20

To the Honorable William R. Stuart, for his Horse Messenger, by Messenger, out of a Granby Mare, we award the second premium of $15

To Isaac Spencer, Esq. for his Horse Moreau, by Moreau, out of a Sky-Scraper Mare, we award the third premium of $10

To Mr. Gustavus W. T. Wright, for his Mare Aurora, by Vingt-un, out of Pandora, begot by grey Diomed, begot by old Medley, we award the first premium of $15

To the Hon. Charles Goldsborough, for his grey Mare, by King William, out of a country Mare, we award the second premium of $10

And to Nicholas Goldsborough, for his grey Mare, by Canton, out of a fine Mare, we award the third premium of $5

Mr. Shepherd's Horse Columbia; and Silver Heels, belonging to Mr. Wright, the late Governor, were exhibited and greatly admired.—These horses gained for their owners, the first premiums at the Cattle Shows in Baltimore, in 1821 and 1822 respectively.

Mr. Nabb's young horse Murat, and the young horse of Mr. Elisha Wright, of Caroline, both three years old, and got by Oscar, were much admired; but were too young to be considered as Stallions, in the opinion of the judges.

Mr. Elisha Wilson's sorrel Colt two years old, by Rat, out of the dam of Quaker, presented to the eye of the sportsman, points of great excellence for the turf.

A number of young horses were shewn and considered as Colts of great merit, as to size and figure; which, at future meetings of the Society, will meet, no doubt, with their just rewards.

ROBERT WRIGHT, *Chairman.*

NO. 2.—ASSES AND MULES.

The Judges appointed to examine and decide upon the Asses and Mules exhibited for premium at the Maryland Cattle Show and Fair, No. 3, Report and award as follows;

To Dr. Joseph N. Gordon, of Kent county, the premium of $15 for his imported Maltese Jack; which they recommend to the attention of the public.

Mr. John Tilghman, of Queen Ann's county, exhibited his Spanish Jack, the Knight of Malta, which the judges think a fine animal, and worthy of public attention. Mr. Tilghman likewise exhibited a remarkably good Jennet, sired by the Knight.

The Judges award the first premium for a two year old Mule, to John C. Sutton, of Kent county, which they think the most perfect animal of the kind they have ever seen.

The second premium for a two year old Mule, was awarded to Samuel Merritt, of the same county, not much inferior to Mr. Sutton's; both these Mules were sired by the above Jack belonging to Dr. Gordon.

A pair of Mules exhibited by James L. Chamberlaine, of Talbot county, three years old last spring, were considered very good Mules. Likewise, one of the same age belonging to Nicholas Goldsborough, was considered a very fine mule; as was also a three year old Mule exhibited by another person. A very remarkable fine year old Mule was shown by Samuel Stevens, Jr. of the same county.

The Judges are of opinion that they never saw exhibited better or more valuable Mules, upon any similar occasion, and in their judgment, they reflect the greatest credit upon those gentlemen who have bred them.

WM. R. STUART, *Chairman.*

NO. 3.—BULLS AND CATTLE.

The Judges appointed by the Maryland Agricultural Society, to examine and award premiums for the best Neat Cattle, present the following report:

BULLS.

For the best Bull over two years old, they award to John S. Skinner, Esq. of Baltimore, a premium of $20, for his promising and well formed Bull SULTAN, of the Devon breed.*

For the best Bull under 2 years old, they award to Gen. Ridgely, of Hampton, a premium of $15, for his fine bull calf four months old, of very superior size and form, of the short horned breed.

For the second best Bull under two years old, they award to Gen. Potter, of Caroline county, a premium of $10, for his young bull 18 months old, of good size and figure, of the Alderney and Dutch breeds.

For the third best Bull under two years old, they award to Robert Goldsborough, Esq. of Talbot county, for his bull 18 months old, of the common country breed, a premium of $5.

MILCH COWS.

For the best Milch Cow, they award to Robert Wright, Esq, of Queen Ann's county, a premium of $15, for his young cow of great size and very superior form, of the breed imported by the late Mr. Gough and Messrs. Joseph Court & Co.

For the second best Milch Cow, they award to Mr. Samuel T. Kennard, of Easton, for his milch cow of the common country breed, a premium of $10.

For the third best Milch Cow, they award to Mr. R. P. Emmons, of Talbot county, a premium of $5, for his milch cow of the country breed.

HEIFERS.

For the best Heifer under two years old, they award to Mr. Joseph Harrison, of Talbot county, for his white Heifer of 18 months old, a premium of $10.

For the second best Heifer under two years old, they award to Mr. Levi Stocker, of Talbot county, a premium of $5, for his red Heifer of the country breed.

OXEN.

For the best yoke of Working Oxen, they award to Mr. Samuel Smith, of Queen Ann's county, a premium of $15. They are of good size and form, and tractable in the yoke.

For the second best yoke of Working Oxen, they award to Mr. Nicholas Goldsborough, of Talbot county, a premium of $10.

BEEF.

For the best stall fed Beef, they award to Gen. Thomas M. Forman, of Cœcil county, for his large well formed Steer, a premium of $10.

For the best grass fed Beef, they award to Mr. Thomas Ford, of Caroline county, a premium of $10.

The judges noticed with much pleasure ten handsome cattle of various breeds, exhibited by Col. Edward Lloyd, of Wye; among them his beautiful and well formed imported bull Champion, of the improved short horned breed; also his remarkably handsome imported heifer Shepherdess, of the same blood.

They were also much gratified with the fine appearance of two bull calves, exhibited by the said gentleman, and sired by the famous Teeswater Bull Bergami, shewing the great advantages to be derived by a single cross from the best improved stock.

They also observed several fine beef Steers, of Col. Lloyd's, of good size, and possessing many good points belonging to excellent beef, and shewing that they had beed fed and managed in a superior manner.

They also viewed and particularly admired several very fine milch Cows and two spayed Heifers of the common country breed, exhibited by Nicholas Hammond, Esq. of Easton; two of the milch cows were of a large size and very fine appearance, and showed that they had been well fed when young, and treated with proper attention—the best mode of improving the country breed.

The Judges were much pleased with a fine Heifer, exhibited by Dr. George W. Thomas, of Chester Town; but as she had taken a premium at a former exhibition of this Society, they are of opinion that she is not entitled, from that circumstance, to a premium at this time. They also noticed two bull calves of the Polled breed, exhibited by the same gentleman, which evinced his laudable attention to the improvement of the best breed of cattle.

The Judges also noticed a yoke of working oxen, exhibited by Nicholas Martin, Esq. of promising appearance.

The Judges viewed and examined with peculiar satisfaction, two yokes of handsome young

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most exclusively in their capacity for the Turf.—It is admitted that a mixture of such horses with common mares, has been sometimes productive of animals well fitted for the saddle and the draught. But in other countries, and especially in England, some care has been taken to prevent such mixtures; and the Breeders have found it more conducive to their several purposes to preserve the different stocks of the race horse, the hunter, the dray horse, the coach horse, the farm horse, and others, entire and unmixed. Among our farmers, whose peculiar advantage is the main object of the Society, it is probable the Canadian Breed, or other horses famed for strength and the draught, should be more the subject of preference than the race horse.

A MEMBER.

* *Bred by* Richard Caton, *Esq. out of FLORA by TAURUS, both imported; and has been sold to Mr. J. D. Witherspoon, of South Carolina.*

oxen, exhibited together in a small cart, by Col. Thomas Emory, of Queen Ann's county; one yoke three years old, and the other under two; very gentle and governable in the yoke. These oxen, from having been accustomed to the yoke at an early period, proved the great advantage of breaking such animals to the draft when young. An additional pleasure was derived from the knowledge that these oxen had been gentled and broken to the yoke by two of Col. Emory's sons, very active and fine looking youths, who were both present. When the sons of respectable farmers are thus taught to labour in early life, and to believe that they are not degraded by following the plough, we may reasonably expect to see the greatest improvements in agriculture.

HENRY MAYNADIER, *Chairman.*

NO. 4.—SWINE.

The Judges appointed to decide on the merits of the Swine, entered upon that duty with a confidence inspired by the fine and beautiful display of animals submitted to their inspection. They take leave to express the high gratification they experienced, on finding their most sanguine expectations so far surpassed. They consider the time as near at hand when this most valuable, but much neglected race, the very basis of husbandry, will assume that high station among our domestic animals, to which their importance so justly entitles them. After devoting to this subject, their most deliberate consideration and their best judgment, they proceeded to award the premiums as follows:—

For the best Boar, to George Wright, of Queen Ann's county.

For the second best Boar, to Elijah Forman, Esq. of do.

For the third best Boar, to Edward Lloyd, Jr. Esq. of Talbot county.

For the best Sow, to Samuel Kennard, Esq. of Talbot county.

For the second best Sow, to Nicholas Goldsborough, Esq. of Talbot county.

For the third best Sow, to Samuel Jackson, Esq. of do.

The Judges cannot take leave of this interesting subject, without paying a just tribute to the merits and various excellences of a number of young Swine, whose fine appearance excited their particular admiration. A young Barrow of Samuel Stevens, Jr. Esq. of a size greatly disproportionate to its age—a beautiful sow of Mr. A. T. Ross—and the valuable proportion and symmetry of some shoats exhibited by Mr. James S. Henesley, of Queen Ann's, of the Dutch, and by Mr. Loveday, of Talbot, of the Cobbett breed. John S. Skinner, Esq. of Baltimore, the enlightened and indefatigable Editor of the Farmer, exhibited a young Boar and Sow, whose great growth and healthy appearance, fully entitled them to the high reputation which they have acquired on the Western Shore.

The Judges conclude with begging the indulgence of the Society, for any imperfection in the performance of a duty, somewhat invidious, which was rendered more difficult by the misarrangement of some of the papers, which might have been necessary to form a decision satisfactory to the respective competitors, as well as to themselves.

R. BROWNE,
JOSEPH MARTIN,
ANDREW SKINNER,
S. DICKINSON.

NO. 5.—REPORT ON SHEEP.

The Judges who were appointed to examine the sheep exhibited for premiums, at the third Maryland Cattle Show, beg leave to award and adjudge as follows:

To James Nabb, Esq. the premium of $8, for his full blood Bakewell Ram. This was the only Ram exhibited.

To Samuel Stevens, Esq. the premium of $8, for the best Ewe, being a mixture of the Merino and Bakewell blood.

To James Nabb, the premium of $6, for the second best Ewe, of the mixed Bakewell blood.

To Edward Lloyd, Jr. Esq. the premium of $5, for his two Wethers over 2 years old, of the mixed Bakewell blood. These were the only wethers of that age exhibited.

To Samuel Stevens, the premium $5, for two best Wethers under two years old, of the mixed Merino and Bakewell blood.

To Edward Winder, Esq. the premium of $3, for the two next best Wethers under two years old, of the mixed Bakewell blood.

And in addition to the above, there were exhibited merely for show, by Nicholas Hammond, Esq. two yearling country Wethers, large and well covered with wool.

Six of the Tunis mountain broad tailed Sheep, were entered for premium by James Goldsborough, Esq. which from the unpromising weather, were not brought up. They would have afforded, had they reached the field, an interesting variety at least, of this kind of stock.

The Judges have much pleasure in remarking, that from the few *specimens* of sheep exhibited on this occasion, there was ample evidence of the advantages already derived to our country, from the introduction of the valuable Bakewell and Merino stocks amongst us—the one for improving the quantity and quality of the wool, and both for producing a greater aptitude to fat. But they cannot close this report without regretting that the number of sheep brought out was not greater, as they believe this shore to abound, and perhaps to excel, in stock of this description particularly. They are indeed persuaded, that some of the gentlemen who exhibited sheep on this occasion, could have shown whole flocks that would not have been much inferior to their selected specimens, fine as they certainly are.

THOS. EMORY,
NS. G. GOLDSBOROUGH,
WM. H. TILGHMAN.

NO. 6.—IMPLEMENTS OF HUSBANDRY.

The Judges appointed to view and examine the different Implements of Husbandry, exhibited for premiums as well as for inspection, after carefully examining the same, Report as follows:

That Mr. Gideon Davis of Georgetown, District of Columbia, is entitled to the premium for the best plough.

The Judges have felt somewhat at a loss to decide between the candidates for this premium, as all the ploughs exhibited were of very handsome construction, and efficient in operation; but under all these circumstances, they have thought proper to give the preference to Mr. Davis.

That Mr. Nathan Townsend is entitled to the premium for the best constructed Harrow, for the cultivation of Indian corn. The Judges take pleasure in recommending to the notice of the Society and the Farmers generally of this State, a Straw Cutter exhibited by Mr. Sinclair, and invented by Dayton; the simplicity of its construction, the comparative cheapness and the efficiency of this machine, entitles it to the notice of every farmer who consults economy in the management of his stock.

Mr. Eastman exhibited a machine of the same kind, of excellent construction and powerful in operation; but not so well calculated for general use, on account of the high price at which he sells it.

A Corn Sheller was also exhibited by Mr. Sinclair, of very simple construction; and the Judges have thought it a very useful implement.

Two Wheat Fans were presented for the inspection of the Judges, one by Mr. Sinclair and the other by Mr. Watkins; both improvements on the old fashioned Fan, and both much approved by the Judges; but the preference is thought due to Mr. Sinclair's, on account of its strength, simplicity and cheapness. Mr. Watkins' is a handsome specimen of his ingenuity; but it is rather complex in form, and too dear for general use.

A machine for breaking Flax was also presented to the Judges by Mr. Sinclair; but from its performance, it is thought necessary to notice it only as a new implement.

WM. POTTER,
JNO. C. HENRY,
JOHN W. BATTEE,
SAMUEL HAYES,
EWD. TILGHMAN, 3d.

NO. 7.—DOMESTIC MANUFACTURES.

The Judges, appointed by the Committee of arrangement to examine the articles of Domestic Manufacture which have been exhibited, and to award the premiums to which they might be thought entitled, have performed that duty, and beg leave to submit the following Report:

The Judges were very much gratified to see the number, quality and beauty of several descriptions of manufactures, offered for premiums; amongst which they feel themselves called upon to mention particularly the articles of hearth-rugs and counterpanes; of each of which there were several so nearly equal in quality, and so highly deserving of rewards, that they had great difficulty in coming to a decision. They have, however, to regret that there was, with respect to some articles, but little competition; and indeed that there were others for which they were authorized to award premiums, of which there was not a single specimen offered. The Judges hope this will never be the case again, and that, whenever a future opportunity shall be presented, every person possessing a really good article, will not hesitate to become a competitor for the premium. There are unquestionably many individuals, within a short distance of the place of exhibition, in possession of some of the kinds, for which premiums have been assigned, greatly superior to those which were exhibited; some of whom might have obtained the silver plate, if their articles had been produced.

The first thing upon the list, for which the Judges are authorized to award a premium, is Kersey. This is an article so extensively manufactured in all the surrounding country, that they were greatly surprized there should be but a single piece upon the table. The piece exhibited was, however, a very good and handsome one. It belonged to Mr. Abel Gouty, of Caroline county, to whom the premium is awarded.

Of Flannel, there were several pieces; three of which they deem worthy of particular notice. The Judges have decided the piece offered by Mrs. Lucretia Teackle, of Easton, to be entitled to the premium on account of its superior fineness, softness, and resemblance to imported flannel. The one presented by Miss Susan Chaplin, and the twilled piece by Mrs. Eliza E. Banning, both of Talbot county, were considered very substantial and excellent articles, and not much inferior to the first.

Of Casinet, the Judges observed with surprise and regret, that not a single piece appeared.

There were but two pieces of Carpeting offered, and they were so nearly equal in quality, that their decision was principally made up on account of the superiority of Colours. The Judges award the premium to Mrs. Mary Loockerman, of Talbot county: The other piece was exhibited by Mrs. Lucretia Teackle.

Of hearth-rugs the exhibition was truly gratifying, and the competition much greater than the Judges expected. They have awarded the premium to Mrs. Delila Byus, of Dorchester county; but they are constrained to declare that they had much embarrassment in deciding between Mrs. Byus's, and the rug of Mrs. Eliza T. Goldsborough of Talbot county. There were several others presented, very handsome and excellent; amongst which the Judges particularly noticed one belonging to Miss Mary M. Dawson, of Talbot county, and another to Misses Caroline and Henrietta Harriss, of Rockhall, in Kent county. Indeed all the rugs were beautiful and highly creditable to the makers.

The display of Counterpanes was also exceedingly pleasing to the Judges. They have awarded the premium to Gen. William Potter, of Caroline county. They have, however, to make a similar declaration with respect to this article as to that of hearth-rugs—that they had real difficulty in determining between Gen. Potter's counterpane and a very beautiful and excellent one exhibited by Mr. Levin Caulk, of Talbot county. There were several others on the table very handsome and valuable; amongst which, four offered by Mrs. Jane Catrop, of Talbot county, were observed by the Judges with great approbation. There was another exhibited by Mrs. Jonathan Spencer, of the same county, which they cannot refrain from particularly commending, as the cotton of which it was made grew on her husband's farm, and was spun and wove by herself. It is a handsome and good article. There was also a neat and excellent one, made partly of cotton and partly of wool, belonging to Mrs. Mary Thompson, of the same county.

The Judges were surprised that of an article so generally manufactured as Sheeting, there should be but a single piece presented; and they exceedingly regret that they are obliged to declare, that they do not consider it of a quality to be entitled to any premium.

There were two pieces of Table-Linen exhibited; but the Judges did not think them any way remarkable, and therefore have awarded no premium for this article.

Of Towelling, there was none presented.

There was but little competition with respect to *knit woollen Stockings.* The Judges have awarded the premium to Mrs. Elizabeth Rathell, of Talbot county. There was but one pair of *knit cotton Stockings*, and only one pair of *knit thread Stockings.* The first was offered by Miss Eliza Jones, and the last by Mrs. Mary Jones, both of the same county; to whom the premiums were respectively awarded.

There were several other articles produced for inspection, for which the Judges had no authority to award premiums, but which deserved to be admired. A specimen of Lace sent to the Show by Miss Evelina Martin, of Talbot county, they considered a very beautiful article, and highly evincive of her ingenuity and taste. A sample of Poplin, offered by Miss Mary Hull, of Easton, and of Yarn, intended for flannel, by Mrs. Ann Kennard, of the same place, were viewed with much approbation, and considered as handsome articles of their kind.

Two Hats in imitation of Leghorn, made of grass collected near Baltimore, were presented by Mr. James Lear and Mrs. Jane K. Crawford, which the Judges deemed worthy of great praise; and they regret that they had not at their disposal a premium for these articles.

Mr. John Willis, of Oxford, submitted to the Judges a bottle of Wine made on the 7th day of September last, of Constantia Grapes, cultivated in his garden, with the taste of which they were much pleased, and for which, in their opinion, he is entitled to the greatest credit.

The Judges beg leave to recommend to the Society, that the premiums intended for Sheeting and Towelling, to which none have been awarded, be respectfully presented to Mrs. Eliza T. Goldsborough for her Hearth Rug, and to Mr. Levin Caulk, for his Counterpane. These articles were highly meritorious, and so nearly equal in quality and value to those of the same kind, to which the premiums have been adjudged, that the Judges feel particularly anxious for the success of this recommendation.

SAMUEL GROOME,
WILLIAM CLARK,
THOMAS CULBRETH,
RICHARD PATTISON,
ANTHONY ROSS.

NO. 8.—REPORT ON BUTTER.*

The Judges, to whom it was referred to decide on the quality of the different parcels of Butter, offered for premium at the Cattle Show and Fair, on Thursday, the 7th inst. report,

That twenty-eight parcels of Butter were presented to the notice of the Judges, the greater part of which were of very good quality. From those, the Judges, after a careful examination, selected eight or ten parcels, which they judged to be of superior and nearly equal excellence, and which would have done credit to the market of any city in the United States. There was much difficulty in determining to which of these selected parcels a preference ought to be given, nor was there a perfect unanimity in the decision finally made. After repeated trials and tastings, a majority of the judges decided in favor of a particular parcel, which, in their opinion, possessed, in rather a greater degree than any of the other parcels, the three important qualities, of firm texture, good colour and excellent flavour. On opening the paper attached to this parcel, it appeared to be the property of Mrs. Jonathan Spencer, of Talbot county. The Judges therefore award to her the premium offered by the Society for the best parcel of butter.

C. GOLDSBOROUGH,
JOHN LEEDS KERR,
DAVID BARNUM,
WM. G. W. SMALL,
THOS. TENANT.

Easton, Nov. 8, 1822.

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* *To give the Judges of this article the most agreeable means of deciding on its value, a small parcel of bread had been laid on the table. This parcel was exceedingly admired—no flour superior, or, as some thought, equal to it, had ever been seen before. It was an uncommon sample, and had been prepared at a neighbouring* Wind Mill, *from wheat raised by Mr. Tench Tilghman; who will probably have* 1500 *bushels next year, at the service of Farmers who desire pure, white seed wheat.* -Edit. Am. Farm.

FROM THE NEW YORK STATESMAN.

ON DYEING.

To my Brother Dyer of Cincinnati.

In my last essay I promised to give an answer to some queries that were put to me in the course of your observations on dyeing. The first in order has relation to the article of woad, "whether it is in demand here," &c.

Before I answer those questions, interesting only to yourself, I must beg leave to take notice of some assertions made by you that "no good black, blue, green or purple can be produced without woad, and that all other modes are imperfect, expensive and mischievous"—and you go on to say that no substitute for woad can be found; but that the woad you have raised near Cincinnati, "contains three times as much colouring matter as what is raised in England," being so strong that you "have been enabled to dye blue with it alone and without indigo."

Now, my dear sir, had you published this in any part of Europe, where the master dyers are mostly men of scientific talent and correct information, I should have looked upon it as merely the boastings of a person ignorant of the subject he was writing upon, and should have considered it as unworthy of being answered, for every dyer there of the least information, would have seen it in its true light; but the very formidable impression which it must necessarily produce on the American dyers, who cannot be expected to have much judgment in the art, makes it necessary that the fallacy of your statement should be exposed. I do not suspect you of having wilfully mistated facts, but I charge you with having no knowledge of the original properties of woad, and of having your judgment so completely blinded as to have drawn conclusions that are diametrically opposed to the truth. These postulatory assertions of yours are calculated to do an immensity of mischief, and to lead the public to expectations that can never be realized. They prove one thing however, that your mind has seldom taken a range beyond the woad vat and woad field.

Long before your grandfather's great, great grandfather was ushered upon this globe, all the blues made in Europe were dyed with woad alone, nor was indigo ever seen there until America was discovered—therefore there can be nothing extraordinary in your being able to colour blue with it at the present day.

In Europe, when woad is raised on good land, the produce will be about four thousand four hundred and eighty pounds, when fit for the market, for every acre planted, and each hundred, when it has been raised in a good season is said by some to contain two per cent. of indigo, and by others three, and during a certain period of the late continental war, the French obtained their principal supply of indigo from this plant. You have asserted that the woad you have raised in the state of Ohio, will give three times as much colouring matter as that which is raised in England. I must beg leave to remind you, however, that we have nothing more than your bare assertion for this highly important statement, but should you be correct, you cannot possibly make money more rapidly than by raising this very plant and manufacturing it into indigo. In a letter I received some few years since from Gen. Wade Hampton, then of South Carolina, and soon after he had given up the making of indigo, he informed me, as near as I can recollect, that half an acre of indigo plant did not afford more than sixteen pounds of that dye, or thirty-two pounds to the acre, and that what with the injury sustained by his negroes during the manufacturing, and the small produce, it barely paid expenses. Now my dear sir, if you can obtain one hundred and sixty pounds of even ordinary indigo from one acre of land, you never need go away from the spot where you now are, for there you may rapidly acquire a princely fortune; and if this assertion of yours has not been thrasonically spoken, I congratulate you as being on the high road to fortune and to fame.

In the next place you have asserted that in "your opinion no substitute for woad can be found," and that "the attempt to produce certain colours with any thing else would be imperfect, expensive and mischievous." This is strong language, and pre-supposes that you have in your possession, either from your own practice, or from that of some other persons equally respectable, documents to prove that no other plant can be successfully used in place of woad; if you are in possession of such, you cannot confer a greater favour on mankind than by making it known. Those who are at all acquainted with the properties of woad, must know that it has a double operation in the blue vat—that it acts both as colouring matter and as a medium of fermentation, and that the former is brought into action by the latter. Now, notwithstanding your broad assertion that every substitute for it must have a mischievous tendency, I cannot but believe that if any plant can be found containing an equal quantity of colouring matter, with succulent juices sufficient to bring that colouring matter into action, it cannot but answer as good a purpose as woad; and further, that if a plant can be found containing a much greater portion of colouring matter, with the necessary succulent juices, it must answer a better purpose than woad. That the *indigofera*, *tinctoria*, or the wild indigo plant, is the very material that will be found superior to it, producing more colouring matter that shall be superior in permanency and brilliancy, I shall, against your bare assertion, bring the authority of Francis Cauch, Anderson, Roberts, Mungo Park, Marsden and Barrow.

You wish to know "if there be a demand for woad here." I have had woad for sale in this city for about twelve months, of prime quality, and highly approved of by those who have used it, and in that time I have sold about thirty hundred: how much others have disposed of during the same period I cannot inform you. I have now between two and three tons in the market and have offered it at a low price. The fact is that only a few of the manufacturers are as yet in the way of using woad, and for your further information, I must observe, that a gentleman who has land admirably adapted for the purpose is about to undertake the manufacture, *secundum artem*, and he is determined to sell it at a moderate profit, for the purpose of encouraging the consumption.

On your second query, whether "the manufacturers here would give a reasonable compensation to be instructed in the art of dyeing," I am not competent to determine; and if I were, it would be improper for me to give advice on the subject, as I have a work ready for the press, the price of which will not exceed three dollars, which, to the best of my knowledge, will give instruction on every process of the woollen manufacture, and of every colour in dyeing. Should this work prove deficient, it is very likely that your knowledge may then become doubly valuable.

The answer to your first query will be an answer to your third.

You request also to know, "if any persons here are desirous of becoming acquainted with the manufacture of woad," and if "they would be willing to give a reasonable compensation for it." These are questions which none but those who may happen to require it can answer. The best instructions, that were ever given for manufacturing of woad, are contained in a letter from the late Mr. *John Parish to the Bath and West of England Agricultural Society*, a copy of which will be found in the Artist's Manual, published ten years since, by Doctor James Cutbush, now of the Cadet Establishment, West Point—a work containing a great fund of highly valuable information, and one that ought to be owned by every person capable of purchasing it as a book of reference.

You further ask me to give a description of the wild Indigo plant? I advise you to enquire of any Botanist in your town to show you that plant growing wild in your woods, that is, a species of the indigofera. HOPSON.

GUINEA GRASS.

Extracted from the Wilmington Recorder, North Carolina, by request of the writer.

Mr. Smith, I am so much convinced of the immense importance, of introducing the culture and propagation of the Guinea Grass, and of the highly beneficial consequences that will reward those who will take the little trouble of trying faithfully, an experiment, that I cannot resist the temptation of making one more effort to bring it into notice. The paper you published was too long for the attention of many readers, and the facts too scattered to obtain their particular notice and recollection. I therefore offer you an opportunity, of essentially serving your customers and country, by sending you a short but distinct view of the important subject, from a former publication, with an account of my own success.

GUINEA GRASS.

If it be found to succeed in North Carolina, it will be more valuable than the discovery of a gold mine.

Mr. Bryan Edwards, in Jamaica, considered it next in importance to the sugar cane. Most of the grazing farms throughout the island were originally created, and are still supported, chiefly by means of this valuable herbage. Hence the plenty of horned cattle for the butcher and planter; which is such, that few markets in Europe can furnish beef at a cheaper rate, or of a better quality, than Jamaica.

It yields a quantity of grass and hay almost exceeding belief.

From not more than six plants, a pint of seed was given to one person. No doubt but a small proportion of the product.

In the East Indies it grows to the height of seven feet—admits of being frequently cut—makes excellent hay. Cattle eat it both in a fresh and dry state with great avidity.

Colonel Laurens, formerly President of Congress, Ambassdor, &c. sowed one-fourth of an acre, of *very indifferent land*, in drills. Seed sprung, and soon covered the ground with grass four feet high and upwards. In August, divided *one* of the roots into *twenty-eight* parts, which were immediately replanted. Every part took root and grew finely.

Dr. Brown sowed the seed in the city of Natches, in the month of April, in holes two feet apart.—When the plants attained a proper size, he took them up, and dividing the roots, set them out when the soil was wet, filling up the ground he had appropriated for the experiment. Began to cut the grass on the 16th July; 164 stalks from 6 to 7 feet high, growing from *one* root, weighed together 30 pounds. On the 10th September, a second cutting from *one* seed, weighed 35 pounds—the number of stalks were 184, some of which measured *ten feet eleven inches* in length. Some part of the lot very poor soil—grass there 6 and 7 feet high.

One acre will more than support five horses most abundantly the year round. One-eighth of an acre, of very fertile land, near Fort Adams, from plants set out the first and second week in May, *without any trouble except cutting down the first growth of grass* on the 20th June, say in five to six weeks allowed cutting for plough horses and mules, and supplied them with as much as they could eat during the whole summer. On the 25th September it had been cut four times, and in two weeks would be cut the fifth.

From twenty roots, the fourth cutting yielded 250 lbs. of green grass.

No kind of grass supports the heat of the sun better—and from the first of July until killed by the frost, it will afford a constant and abundant supply of green food.

The seed should be sown as early in the spring as the danger from frost is over, and the plants set out when two or three inches high. They will readily take root. A basket or two of the young plants will be sufficient for an acre.

Seed may be had at J. Gale's, store, Raleigh, at 25 cents a paper, containing four ounces.*

☞ *One hundred plants* would enable a poor family to keep a cow in town, or supply a dray horse with food all the summer.

EXPERIENCE.

5th July, 1822.

About the 20th of May, Mr. A. S. Allen having kindly brought me some seed, which Mr. Gales obligingly sent me, I sowed part of it in a bed 52 feet long by 5 feet wide, in three drills. From it I have planted out, at Smithville, 187 roots, in a bed 23 feet square. I have planted an irregular piece, at home, with 200 roots; and from the same bed many more roots can and ought to be taken, it having been sown, by an unskilful hand, irregularly and too thick. This, with a little difference of soil at one end of the bed from the other, occasions the grass to be uneven. Some of it actually measures a little upwards of 6 feet 6 inches. I should have begun to cut this day, [July 5]—but observing that Dr. Brown, who sowed as early as April, at Natches, began only the 16th July, I think I shall defer it till that day. Besides the above bed, which I shall call my *experiment bed*, I have sowed a much larger space of ground, from which I shall have it in my power to give liberally, to any persons, *without distinction*, disposed to give it due attention, and who will leave their names with you, and the size of the piece of ground they wish to fill. I will endeavour to have these plants in town on Thursday, by sending a boat on purpose, and with pleasure.

COLUMELLA.

AGAIN.

13th July, 1822.

The Guinea Grass that was a little upwards of 6 feet 6 inches on the 5th inst. was measured yesterday, and was then upwards of 8 feet 6 inches, and has put out a fine ear. According to the intention expressed, I made my first cutting on the 16th; but I was too late for more than half, which has gone to seed. Is it not extraordinary, that in this more northern climate than Natches, the grass sown on the 20th May here, should advance to maturity so much sooner that Dr. Brown's, sowed in April? More than half of mine being too far advanced to cut; from those stalks I expect to raise plenty of seed to give away. This rapid maturity is ample proof that the Guinea Grass will succeed completely in North Carolina. COLUMELLA.

I send you a stalk of 8 feet 6 inches, not yet put out in ear; therefore it may be well supposed not near its full growth.

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* NOTE.

We have several times received seeds from our correspondents, who styled then Guinea Grass Seeds; and, altho' the parcels were very different, yet each cultivator seemed to think, that the seeds sent by himself were really those of Guinea Grass.

We sowed one of these kinds which we received from North Carolina and the District of Columbia—the plants matured, and we give a partial representation thereof below: *See* Fig. 1. The seeds thereof are nearly three times as large as red clover seed. We had some, precisely like them, sent to us last summer, and these were called Egyptian Millet Seeds. This plant is mentioned in No. 13, pages 103—4, of our present vol. and we shall receive a parcel of seed this winter, as therein stated, for gratuitous distribution.

Of the other kind, we did not plant any; but we are enabled to give the representation, Fig. 2, from some sprigs of Guinea Grass that were obtained from Jamaica—we compared the chaffy buds on these, with some which we received in a clean state, from Dr. Jno. S. Bellinger, of Duncansville, Barnwell District, South Carolina, and found them to be precisely similar. An account of his cultivation of this Grass and its immense product, may be seen in our third volume, page 331.

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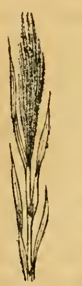

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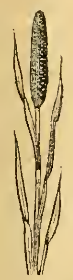

If the Grass grown by Columella, resemble fig. 1, and if that grown by Dr. Brown, at Natches, be represented in fig. 2, then is the difference in the ripening of their seeds explained.

The reader may find a valuable article on Guinea Grass, in our first volume, No. 21, pages 163—5, furnished by our much esteemed correspondent J—— M——. It details the experiments made with this grass by Dr. Brown, in Mississippi state, and by Henry Laurens in South Carolina—with its history and Botanical Description.

Ed. Am. Farmer.

FROM A LIVERPOOL PAPER.

PRESTON GUILD.

Monday, Sept. 2.—The important and interesting ceremony of "Preston Guild," commenced this day. At an early hour the Union Standard was displayed on the tower of the parish church, and the morning was ushered in by the ringing of bells, the inspiring sound of martial music, and the noisy clang of hammers employed in erecting various buildings. The several trades and societies were ranged under the respective banners, and all were actively engaged in setting themselves off to the best advantage. At half past nine o'clock the Mayor, accompanied by the Recorder, Mr. Justice Park, and the Rev. Vicar, arrived at the Town-hall, in a carriage drawn by four horses, escorted by a large party of the Cotton-spinners. His Worship received the deputations from the trades, and the arrangement being completed, at seven minutes past eleven the procession started for the parish church in the following order:

1. Tanners', Skinners', Curriers', and Glovers', company.—2. Spinners, Weavers, and Woolcombers.—3. Shoemakers.—4. Carpenters and Joiners.—5. Butchers.—6. Vintners.—7. Tailors.—8. Smiths.—9. Odd Fellows' Society.—10. Bricklayers.—11. Plasterers.—12. Gardeners.—13. Printers and Bookbinders.—14. Free-masons.—15. The Mayor and Corporation.

The whole of the persons comprising the procession were dressed in new apparel, with sashes and rosettes. The banners were the most splendid ever witnessed. Before the Spinners and others engaged in the cotton trade, cotton trees were carried, and carriages, drawn by horses, contained the steam-engines and different machinery employed in that business, all at full work, and superintended by able workmen, who were chiefly dressed in white clothing.—The exhibition had a most pleasing and novel effect. Between each carriage walked 40 men, with white sashes, and, on a rose-coloured ground, the inscription "Success to the Spindle," "Prosperity to the Warpers," &c. &c. The procession of the Master Tailors claimed particular notice, and excited much laughter, from its singularity. The Smiths were preceded by two stout men, in antique dresses, carrying axes, followed by two others, one in mail and the other in brass armour. The Carpenters and Joiners' Company had a splendid effect; each man carried a wand, surmounted with a gilt square and compass. The "Paradise Lodge of Gardners" were greatly admired. A large crown of flowers preceded the individuals composing the lodge, together with poles bearing specimens of the choicest fruits. Two children raised in a car of flowers, surmounted with trees, personified Adam and Eve, the serpent being placed between them, with a large apple in its mouth. The Printers and Bookbinders came in deservedly for a great share of public attention. In a large vehicle a printing-press was seen at full work, striking off various mottos, which were eagerly purchased. On the side of the carriage appeared the words—"Printing invented in 1440,"—and on the flags—*Libertas non licentia*," and "*Sit lux, et lux fuit.*"—Next came the *Odd Fellows*, attired in the eccentric dress of their order. The Free-masons, decorated with their several orders, closed the procession, and lined the way from the Town-hall to the church, for the Mayor, Recorder, and members of the Corporation, who proceeded on foot, together with the officers of the city, bearing the Mace, &c. The sermon was preached by the Vicar, from the 4th verse of the 122d Psalm; and at the conclusion of Divine Service, the procession, in order given above, paraded all the principal streets of the town back to the Town-hall, where the bands played "*God Save the King*," and "*See the conquering Hero comes.*" The Mayor and Corporation walked the whole of the distance, though the rain poured very fast. The whole line of procession was thronged with spectators, together with the tops of houses and churches. The windows presented a brilliant assemblage of beauty and fashion. In the evening the opening of Guild Ball was numerously attended, and displayed a scene of beauty, elegance and fashion, unrivalled in this town, and perhaps in the county. The dresses of the ladies were particularly splendid, uniting the very height of fashion, with classical chasteness. Silver lama over white muslin, with a profusion of pearl ornaments, in a variety of devices of loops, broaches, tiaras, necklaces, &c. was the prevailing costume. The simplicity and elegance of the general appearance, was uncommonly attractive and beautiful.

Second Day, Tuesday.—The processions of Monday were gay and imposing, but the splendour and fascination of the Jubilee were reserved for this day. The Mayoress attended at the Town-hall, at half-past nine, to receive those ladies who intended honouring her with their company in the ladies' procession, which moved to the parish church at half-past ten, attended by the companies and societies; after divine service, the whole paraded round the market place, and thro' Cheapside to the Town-hall. The procession was led by the officiating lady mayoress, supported by the mayor and his chaplain. The Countess of Wilton, with the Hon. Mr. Stanley, followed, and they were succeeded by a train of ladies, which extended from the church to the market-place.

LETTER II. ON THE POOR LAWS.

Sir—I have failed in the object of my first letter, if I have not proved that the cause of charity gains nothing from Legislative interference. I shall fail in the present, if I do not convince you that, the attempts of a Legislature to make people charitable have a tendency directly the reverse. The avowed object of the legislative establishment is to prevent begging and vagrancy; that is, to prevent applications being made to individuals for occasional and temporary relief, or in other words, to limit the opportunities which those charitably disposed would otherwise have of exercising their liberality; and to furnish the unfeeling with a ready and plausible excuse for neglecting their duties. The benevolence of a truly good man, whose charity is a principle and not an impulse, is a fixed system. An application to such a man for aid would be neither granted nor refused without inquiry. If the object proved deserving and distressed, a proper sense of his duty would not permit him to be satisfied with relieving the immediate distress; but his conscience would impel him to attempt the removal of the cause of misery, and to afford such assistance as would have permanently beneficial effect. If the cause of the poor man's suffering be only accidental or temporary, the pious christian will teach him patience and fortitude, exhort him to hope for better times, support him in adversity, point out the mode and provide him with the means of renewed exertion. But the law has directed, that such application shall be made, not to the christian, but to the overseers of the poor. In the time of sorrow, then the distressed man applies to these overseers with the confidence of relief. He is examined with suspicion and insults, or perhaps received without any examination at all: he is treated probably with rudeness or contempt at the best, with indifference and unconcern for his suffering; finally, conscious of the curses which the additional expense of his subsistence calls down upon him, he is ordered to the Poor-House, than which, he had better have been committed to prison. The same inequity, profligacy, and debauchery reigns in one as in the other. The same love of idleness, the same hatred of honest industry, the same contempt for laws, whether human or divine, the same cunning and falsehood, the same resolution to prey upon their fellow men, and the same propensity to blaspheme their Creator, rules the poor-house, (at least such as I have seen) and the prison. Of the two, I think the prison least dangerous to morals, since in that a general intercourse of its inmates is under severe restrictions, and most external sources of, and incitements to vice are excluded. Can a man, plunged in such a sink of corruption, come forth uncontaminated? —placed in such a pestilential vapour, can he escape contagion? Will he not be liable to contract the moral diseases of his companions, and prefer a life of idleness and debauchery, at the public expense, to bread hardly earned by constant and laborious toil? But suppose a miracle, let him go out unhurt from the furnace of this fiery trial; let his social qualities resist the force of example; let his affections be deaf to the voice of persuasion; and his morality impenetrable to the shafts of ridicule—what good has the legislature's charity done him? Can they recompense the torture of his feelings while caged in this earthly pandemonium? Can they obliterate the remembrance of his terrors for the safety of his soul? Can they chase away the shadows of guiltiness which have haunted him since the impure contact? Or can he, when want again assails him, implore aid from such hands, on such terms? A legislature's charity, then, does not seem the most proper or the most efficient for the subject of that charity, even when he is most deserving.—If the sphere of a truly benevolent man's exertions is contracted by the effect of Poor Laws, will they not reduce into a still narrower compass the charities of a more numerous class?—those whose only charity consists in giving money. The greater portion of this class have much feeling, but at least as much dislike to trouble; they are indeed humane, but their apathy cannot be made to yield to the active offices of humanity. There are some of these men, who, if they had the proper sum in change to give to a beggar, would bestow it freely, but who would not walk twenty yards to procure it. Such men give money to the miserable, not more from charity than from selfishness, and a love of their own ease. They suffer less in giving a few dollars to the wretches whom accident casts in their way, than they would suffer from a reflection that possibly one of those objects had actually died for want of that relief which they withheld. The Poor Laws do not increase the charities of this class—they take away its principal motive to benevolence—since they assure it that the poor shall not actually die, nor even be in any great danger of starvation. Those who would support the poor from the ostentation of humanity are deprived of that inducement, since a man can gain little credit by doing that, which, if he does not do, will be as well or better done by the law. And thus, one of the most copious sources of charity is destroyed by the operation of the Poor Laws.

There is yet another class (a small one I fear) whose charities the Poor Laws completely paralize. It consists of those whose reading and reflections have convinced them of the ruinous consequences of such a system, and whose principles of justice towards their country and posterity forbid the indulgence of their feelings in acts of charity, which will but increase the evils of pauperism, and hasten that catastrophe, which the Poor Laws, if persisted in, must unavoidably produce.—It may be objected to this letter that the picture which I have drawn of the Poor-house is better suited to a declamation than a serious argument. I can only reply that I have painted faithfully from that Poor-house with which I am best acquainted, and which ought to be as well regulated as any in the state; and that I hope to prove hereafter that the better the condition and the regulations of Poor-houses, the more quickly will that ruin arrive, which it is my object to guard against: and if it were even possible to make the labour of paupers nearly but not entirely support themselves in Poor-houses, the dangers I apprehend would be increased and hastened.

I remain, with respect, &c. LUCIUS.

GAS LIGHTS.

As the City Gas Company are proceeding with great rapidity in completing their works, and laying the pipes for conveying the gas, a few remarks on the proposed method of illumination may be useful to those unacquainted with the subject.

There are at present but very few of the principal cities and towns in Great Britain in which this method of lighting is not in use, and its superiority over every other mode of obtaining light is so great that the gas light system has been introduced into Russia, Germany, France, Portugal and many other parts of Europe.

The theory of the production of gas light is precisely the same as that of our usual method of obtaining light. In our common lamps, candles, &c. the wick by capillary attraction conveys the oil, tallow, or other inflammable substances to the point where it is consumed. The flame of the lamp or candle performs the office of a retort and fire, and decomposes the oil or tallow; the gas thus produced takes fire, keeping up the process of decomposition, and at the same time affords us light.

The proposed plan of employing gas lights is then nothing more than performing on a great scale what is effected by each lamp or candle now used. Instead of the trouble of filling lamps, removing the crust of charcoal that collects around the wicks, or flies off in sparks, (and which is the deposition from the oil during its decomposition, or convertion into gas) we are to be presented with all the illuminating properties of the oil without its charcoal.

The oil is to be decomposed in iron vessels, and its gaseous, or illuminating part collected in a large receiver, from which it will pass out in the state of an air to the pipes in the streets, and thence to each lamp, where it will be set fire to like any other lamp. The gas will *not* take fire of *itself* on its escape into the atmosphere, but only on presenting to it some flaming body.

It will be scarcely credited that many intelligent and in other respects well informed persons, believe the reverse to be the fact—such however is the case.

The utility of gas lights is not limited to the purposes of illumination—a gas lamp emits the same quantity of heat as a lamp of the usual kind, having a flame of the same size, and it is employed in Europe for various purposes in the arts, as soldering, heating copper plates, &c. In proof of this we shall extract some parts of the statement of persons who have long used gas lights for various purposes.

Mr. Ackerman, of London, who has a very extensive printing and engraving establishment, and whose name is not unknown in this country, states that his printers use 16 gas lamps instead of charcoal for heating their copper plates, and that the saving in consequence is £25 sterling annually.—The whole of Mr. Ackerman's establishment, his public library, printing offices and work shops, together with his dwelling house from the kitchen to the drawing room, are lighted with gas to the total exclusion of all other lights. The annual expenses of lighting this establishment before the introduction of gas lights, he states at £160 sterling—the present expense of gas, £40 5s.—making the balance in favour of gas £119 15s. per year.

"Such" he says, "is the simple statement of my present system of lighting, the brilliancy of which when contrasted with our former lights, bears the same comparison to them as a bright summer sunshine does to a murky November day; nor are we, as formerly, almost suffocated with the effluvia of charcoal and fumes of candles and lamps.—In addition to this, the damage sustained by the spilling of oil and tallow upon prints, drawings, books and papers, amounted annually to upwards of £50. All the workmen employed in my establishment consider *these gas lights as the greatest blessing*, and I have only to add that the light we now enjoy were it to be produced by means of Argand's lamps or candles, would cost at least £350 per annum."

Mr. Cook, a manufacturer of metal toys at Birmingham, and who was one of the first to adopt the use of gas, writes thus—"in all trades in which the blow pipe is used with oil and cotton, or where charcoal is employed to produce a moderate heat, the gas flame will be found much superior both as to quickness and neatness in the work; the flame is sharper, and is constantly ready for use; while with cotton and oil, or charcoal, the workman is always obliged to wait for his lamp or coal getting up, that is till it is sufficiently on fire to do his work. Thus a great quantity of oil is always burned away useless; but with the gas the moment the stop-cock is turned, the lamp is ready, and not a moment is lost."

POPULATION OF THE WORLD.

According to a Satistical Chart, published in a Neapolitan journal, the universal population of the Globe is 632,000,000 thus subdivided—172,000,000 in Europe; 330,000,000 in Asia; 70,000,000 in Africa; 40,000,000 in America; and 20,000,000 in the other parts.

Estimate by approximation—In Europe, Births, per annum 6,371,370; per diem, 17,458; hour, 727; minute, 62; second, 1.

Deaths, per annum, 5,058,822; per diem, 13,860; hour, 577; minute, 9.

In the entire universe—Births, per annum, 23,407,407; per diem, 64,130; hour, 2,672; minute, 44.

Deaths, per annum, 18,588,235; per diem, 50,927; hour, 2,122; minute 35.

Persons arrived at the age of 100—in 1800, according to Larrey, there were at Cairo 35 individuals who had attained to the age of 100 and upwards. In Spain, in the last age, were to be seen at St. Jean de Page, a town in Gallicia, 13 old persons, the youngest of whom was 110, and the oldest 127; their ages made together. 1,499 years. England is generally accounted to contain, 3,100 individuals of 100 years old. At the commencement of the present century there were in Ireland 41 individuals from the age of 95 to 104, in a population of only 47,000 souls. In Russia, amongst 891,652 dead, in 1814, there were 3,531 individuals of from 100 to 132 years of age. In Hungary, the family of Jean Kovin has furnished the example of the most extraordinary longevity. The father lived 172 years, his wife 164 years; they were married for 142 years, and the youngest of their children was 115.

Daniel Bernaulli calculated that the innoculation of the small-pox has been the means of prolonging human life by three years, and the new observations of Duvillard gave the same result from vaccination.

FROM THE NEW YORK COMMERCIAL ADVERTISER.

AGRICULTURAL SOCIETY.

At the sale at Washington Hall, on the 14th, in this city, after the distribution of the premiums, the Crawford hat, manufactured by Miss Harrison, of Duchess county, which took the first premium, was purchased by Alexander Spencer, Esq. of Greenbush, at 120 dollars; the one by Miss Hedges, of East Hampton, Long Island, which took the second premium, by John L. Graham, Esq. of this city, at 55 dollars; the one by Miss Babcock, of the same place, which had the third premium, by Peter H. Schenck, Esq. at 50 dollars; and that of the two young ladies under twelve years, of grass from the garden of colonel Rutgers, by T. R. Smith, Esq. of this city, at 31 dollars. The elegant lace veil which attracted so much attention, made by Mrs. Bush, of this city, was purchased by John L. Graham, Esq. at 21 dollars.

From a Poughkeepsie Paper, New York.

At the Duchess county fair last week, Miss Julia Harrison, of Amenia, exhibited the finest imitation Leghorn hat, *of her own manufacture*, even seen in this country. She was offered for it one hundred and fifty dollars on the spot, but refused to sell at that price. It is said that this ingenious young lady was busily occupied for ten weeks in the manufacture of this elegant article. If she had sold it, she would have been paid for her labor at the rate of fifteen dollars a week, very tolerable wages for these hard times.

This meritorious young lady, we are happy to learn, was much caressed at the agricultural ball. The gentlemen vied with one another, in evincing their sense of her superiority. This is as it should be. It must have been gratifying to her feelings, and rouse the ambition of others.

From the Rochester Telegraph, New York.

Arrived at this village on Wednesday last, the canal boat Western Trader, Captain Garney, from Utica, with a full freight of emigrants, consisting of eight families, in all 60 persons, who have come the distance of 150 miles, for the moderate sum of $1 50 each ; thus completely elucidating one of the many important benefits of the great western canal.

TANNING DISCOVERY.

Six weeks since, application was made to a person for the loan of one thousand pounds to a young chemist, who had made a discovery ; he was too poor to substantiate by experiment. The money was obtained, and in a few days repaid by the borrower, already raised to sudden affluence by the private disposal of his invention: It is a new mode of tanning skins, combining such rapidity and economy, as promise to the public an immediate and immense advantage. Raw hides hitherto lying twelve months in the tan pit, and subjected to a process otherwise defective and precarious, are now perfect leather within six weeks, and at less than half the expense. The gentleman who bought the invention, is a noted opposition member and contractor ; and from the terms of his stipulation, we may form some judgment of the probable magnitude of the results. He has paid him ten thousand pounds down, he has given him obligatory deeds securing him £5,000 on the first of January, £5,000 per annum for the four years next succeeding, and afterwards £11,000 a year for life! It is expected that the price of a pair of boots will not exceed eight shillings, and a corresponding fall will be produced in all articles of leather manufacture.—*London Globe.*

PATENT GRIDIRON.

New-York, 12th Nov. 1822.

To Mr. Mussey.

I willingly, sir, give you my opininn on your patent, economical utensil, the hollow-barred Gridiron, with a Reflector and a Dripping-Pan.

Broiling has been considered as the most savoury, but at the same time the most wasteful way of cooking meat. Your invention removes in a great measure, from this operation, the charge of extravagance, by saving the fat and juice from destruction by the hot coals. The rays of heat repelled from the bright surface of tin, add to it the valuable properties of the Dutch oven. Having satisfied myself by experiment that it is admirably calculated to render flesh palatable in a saving manner, I recommend your gridiron and its appurtenances, as a piece of kitchen apparatus, to all house-keepers who are desirous of combining the luxury of eating with frugality in cooking.

SAMUEL MITCHELL.

N. B. The above Gridiron may be seen at this office, and orders received for them.—*Nat. Adv.*

BUTTER.

This delicate and valuable domestic article, it is known, is manufactured in considerable quantities in Orange county. At a recent cattle show at Goshen, it appeared that John M. Graham made 2535 lbs. of butter from 20 cows. His farm is only 95 acres ; he has 39 hogs kept on milk, which will weigh 200 lbs. each, when killed.—Col. Moses Crawford, of Montgomery, produced 2051 lbs. of butter from 20 cows. These are valuable products.—*N. Y. Advertiser.*

Unparalleled Munificence.—The Hon. Stephen Van Renssalear, has engaged Professor A. Eaton, of Troy, to take a Geological and Agricultural Survey of the Great Canal route from Albany to Buffalo, a distance of 380 miles. The survey is to include the breadth of ten miles. An accurate investigation of the rocks, soils, minerals and plants, is to be made on both sides of the canal.—The method of culture adopted by the best practical farmers is to be sought out, and all varieties of soil to be analyzed.—*Albany Daily Adv.*

BUTTER MAKING IN COLD OR WINTER WEATHER.

Rahway, New Jersey, Feb. 24, 1822.

J. S. Skinner, Esq.

Respected Friend,—Thy favour with the papers came safe, for which please to accept my most sincere acknowledgments. I feel myself greatly in debt already, and have a sincere wish, if I only had the means, to be in any way useful to the support of a paper, which I believe will produce the most important and beneficial effects, upon the agriculture of this country.

If not generally known, it may be useful to mention a very easy and excellent method of making Butter, in winter, or in cold weather, late in the fall. We began it last fall, and have practised it since with uniform success. It consists simply in heating the cream, instead of souring it, in the usual troublesome and tedious manner.—The cream, as it is skimmed, is put into a vessel, until enough is collected for churning, and kept in any convenient place where it will not freeze. It is then poured into a copper or brass kettle and hung over the fire until scalding hot, but is not suffered to boil—it is then poured back again into the cream pot, and left to stand till evening, by which time it will be nearly cool, rather cooler than new milk; it is then churned, and with us, has never failed to produce good butter, in a very short time ; and of a better quality and colour than when soured in the usual way. It is indeed scarcely any more trouble to make butter in this way in winter, than in the usual mode, in summer. Care, however, must be taken that the fire be not too strong, as if the cream should be in the least burnt, it will give the butter an unpleasant taste.

I thought it right to mention this process to you, as we have found it to save a great deal of trouble and some vexation. And now that we have such a convenient medium, I think it is incumbent on all Farmers to report whatever they believe may be new and useful to others, and leave it with the Editor to judge whether it may be expedient or not to publish our communications.

I am respectfully thy friend,
HUGH HARTSHORN.

CHILLICOTHE TWIN CALVES.

We were, on Saturday last in common with a number of persons, favoured with the sight of these beautiful animals. They are *Twins*, and were raised and fatted by our respected fellow-citizen, George Renick, Esq. of this neighbourhood. They are seven years old; and for size and beauty have seldom been equalled in America. The Steer was weighed in our presence, at the Hay Scales in this town ; and was found to weigh 2996 pounds. The Heifer is nearly as large as the Steer, and is supposed by good judges to weigh within 200 pounds as much; but as she appeared somewhat wild, it was deemed unsafe to weigh her. We understand that it is Mr. Renick's intention to take them down the river to Orleans.

Chillicothe Supporter.

THE FARMER.

BALTIMORE, FRIDAY, NOVEMBER 29, 1822.

PRICES CURRENT.—CORRECTED WEEKLY.

White wheat, $1 35 to 1 40—Red do., $1 27 to 1 30—Rye, 70 to 75 cts.—Corn, 48 to 50 cts.—Oats, 35 to 37½ cts.—Flour, best white wheat, $7 37½—Howard st. Superfine, $6 87½—Wharf, do. 6 12½—do. do. 5 75—Beans, $1 25 to 1 37½—Peas, black eyed, 55 to 60 cts.—Clover seed, 9 to $10—Timothy seed, 4½ to $5—Flax seed, 75 to 80—Whiskey, from the wagons, 34 to 35 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Herrings, No. 1, $3 62½ per bbl.—No. 2, $3 37½—Shad, No. 1, none—No. 2, $6—Bacon, round, 10 to 11 cts—Straw, $10 50 to 11 per ton—Hay, $17 50 to 18.

No material change in the trade or prices of Maryland Tobacco since last report.

Houses, Lots, and Lands.

THOMAS W. GRIFFITH,

At his Office near the Exchange, Baltimore, receives, registers and exhibits, descriptions of all kinds of REAL ESTATE, which it is desirable to buy, sell, exchange or rent.

Property is advertised and conveyances made when required, and every other assistance offered in effecting sales or purchasers on moderate terms. Experience has proved that much trouble, expense and delay have been saved by such agencies, and no doubt is entertained but the establishment will receive that support necessary to render the Office a public as well as a private benefit.

October 15th, 1822.

FOR SALE,

At a low price, and on a long credit,

The FARM on Elk Ridge, occupied by Mr H. Scott, and formerly owned by Luther Martin, Esq. containing about 1100 acres.

It is situated about eleven miles from this city, near the Washington road, and is considered remarkably healthy. The situation is handsome, and the land easily improved by plaster and clover. This property will be divided if required, and immediate possession given. For terms apply to

ROBERT & JOHN OLIVER.

FOR SALE.

A Heifer of two years old, from an imported Devon Cow, by the celebrated Improved Durham Short Horn Bull, Denton.—Price $100—Apply to the Editor.

AGRICULTURE.

FIRST VIRGINIA CATTLE SHOW.

OFFICIAL ACCOUNT

Of the Proceedings of the Fredericksburg Agricultural Society at their late meeting; and of their Agricultural Show.

The Society met, according to notice, at the Indian Queen Hotel, at 10 o'clock, A. M. of the 13th November, and continued by adjournment, until the evening of the 14th.

The following gentlemen were elected officers for the ensuing year:

James M. Garnett, President.
John Taliaferro, of Hagley, Vice President.
William F Gray, Secretary.
John T. Ford, Assistant Secretary.
Robert S. Chew, Treasurer.

Committee of Correspondence.

John Taliaferro, Robert Lewis, Garrit Minor, Enoch Mason, Wm. F. Gray.

Committee of Premiums.

George Hamilton, Robert Lewis, John Gray, sen. Wm. Richardson, Enoch Mason, Carey Selden, Wm. Bernard, John T. Ford, James Smock, Henry Thompson.

A circular letter from the President of the Albemarle Agricultural Society, accompanied with certain proceedings of that society, proposing the creation of a fund for the support of a Professorship of Agriculture in the University of Virginia, and inviting the co-operation of this society for that purpose, was read—Whereupon it was

Resolved, That the members of this meeting highly approve of the proposition of the Albemarle Society for the establishment of an Agricultural Professorship at the University of Virginia, and that our President be requested to address a letter to the President of said society, expressive of this sentiment; and also to give general notice to all our members, that the proposition will be taken into consideration at our Spring meeting, there being too few members now present to decide finally on so important a subject.

On motion, *Resolved*, *unanimously*, That the thanks of this meeting be presented to J. S. Skinner, Esq. Editor of the American Farmer, for the many instances of polite attention to the interests and wishes of this society which we have experienced at his hands, and for his meritorious labours in the cause of agriculture generally.

Resolved, *unanimously*, That this meeting view with much satisfaction, the elegant workmanship displayed on the premium plate awarded by the society; and that the artist, Mr. Warner, of Baltimore, be respectfully recommended to the patronage of our sister societies.

Twenty-five new members were admitted.

Ordered, That the committee on premiums cause a detailed report of the exhibition, together with such remarks as they may deem proper, to be drawn up and published.

Ordered, that the address of our President delivered to the citizens assembled at the Cattle Show, be published with the proceedings of this morning.

Extract from the Minutes,
WM. F. GRAY, Sec'y.

REPORT of the Committee appointed to prepare for publication, an account of the Fredericksburg Agricultural Show, on the 13*th and* 14*th November*, 1822.

The Committee take peculiar pleasure in reporting to their Fellow Citizens, the result of the *First Virginia Agricultural Show*—inasmuch as the exhibition both of Stock and Agricultural Implements, far exceeded their expectations.—The Show of Horses and of Cattle was very fine of Sheep and Hogs, excellent. And the Committee are well convinced, from what they heard on every side, that the display would greatly have exceeded what it was, if their worthy, but incredulous Brethren, could only have been persuaded to believe, that such a thing as a respectable Agricultural Show could possibly have been gotten up, in this part of the Ancient Dominion. The public are now satisfied, that our Society are quite in earnest, in what they have so long promised; that we have both ability and the will to offer good premiums, for the encouragement of Agriculture; and that it will be entirely their own fault, if hereafter our Shows and Fairs should not merit their constant attention, and cordial support.

The Show was held within one of the beautiful enclosed lots of Mr. J. S. Thornton, on the New Turnpike Road, the use of which he had politely tendered to the Society. A more eligible spot could not have been selected. As every thing pertaining to exhibitions of this sort, is new in this State, it was to be expected, that some necessary preparation for it would be overlooked. The committee, accordingly, have to notice a deficiency in the enclosures, designed for the reception of Stock; but as the number of Stock brought on the ground was not very great, the deficiency was not severely felt; and this defect being seen, better arrangements will, of course, be made for the next Show, when it may be calculated, that they will be more needed.

The first day, according to arrangement, was entirely devoted to the exhibition and examination of Stock; the second, to the examination of Agricultural Implements, a trial of Ploughs, and awarding of Premiums, which were delivered by the President to the successful competitors, on the ground.

The following is the result of the adjudications of the Committee.

Horses.—A Silver Pitcher, with emblematic devise and inscription, cost $33, was unanimously awarded to Mr. Ira Lipscomb, of Spotsylvania, for his Horse *Superior*, as the best Stallion exhibited. The Committee regret, that they are not furnished with the pedigree of this noble animal.

In regard to the Mares, although several were exhibited, the Committee being divided in opinion, as to their merits, no premium was awarded.

Bulls.—A Silver Pitcher, with emblematic device and inscription, cost $28, was awarded to Col. George Love, of Fauquier, for his Bull *Pluto*, 1 year and 6 months old. Pluto was got by the celebrated Lancashire Bull, called Rising Sun, imported from England by Mr. Smith Saunders, of Kentucky, and came out of a fine milch Cow of the Cross breed, belonging to General Donaldson, of Ky. He is a fine animal, and is offered for sale by his present owner.

Cows.—A beautiful Silver Cream Cup, with emblematic device and inscription, cost $22, was awarded to Mr Geo. N. Grymes, of King-George, for the best Milch Cow.

Hogs.—A Silver Mug, cost $15, was awarded to Mr. Geo. T. Hord, of Caroline, for the best Sow.

Sheep.—A Silver Mug, cost $15, was awarded to Mr. John Gray, of Travellers' Rest, Stafford, for the best Ram; and

A similar article, of same value, was awarded to Capt. Lewis W. Daingerfield, of Spotsylvania, for the best Mutton.

Ploughs.—A Silver Mug, value of $15, was awarded to Mr. McCormick, of Fauquier, for the best Plough; and also a discretionary premium of $5, for an Angular Balance, by which to ascertain the force necessary to move a plough.

Cheese.—A discretionary premium of $5, was awarded to Mr. Thos. Cumings, of Spotsylvania, for some Pine-Apple Cheese, of his own making. The making of Cheese, is a branch of domestic economy, too much neglected in this State; and it is hoped, the encouragement held out by the Society, will induce many of our Farmers' wives and daughters to *try their hands* by the next Show.

Among the various Implements exhibited, all of which appeared to be useful, in their way, the Committee examined, with much satisfaction, the following:

A Wheat Fan, improved by Mr. Meyers, of Georgetown, (Dist. of Col.) which turned with great comparative ease, and had a motion communicated both to the screen and the riddle by the same turn of the handle. But the committee did not deem it within the rules of our society to award a premium for it, although it well deserved one.

Two Cutting Boxes of simple construction and considerable power, made by Mr. Cochran, of Fredericksburg, which are well calculated to save labor, and would be highly advantageous on large farms.

Also, the model of an ingeniously contrived Drill Plough for planting corn, which would be of great service on the extensive flat corn fields of the lower country.

The committee also noticed with much satisfaction, a beautiful Counterpane, made by Mr. Cummings, and a good looking roll of cloth made by Mrs. Scott, of Spotsylvania, and fulled by Mr. Curtis, of Fredericksburg. The committee indulge the hope that at the next Show, they will have the pleasure of awarding some handsome premiums, for the encouragement of this branch of industry and ingenuity; being well convinced that the *fire-side manufactories* are the best for an agricultural people.

Of the Ploughs, there were only three tried; McCormick's, Wood's or Freeborn's, and Cochran's. The committee here subjoin their calculations, and leave it to the public to decide.

	Width of Furrows	Depth	Force.
	M'CORMICK'S.		
1st trial	16 inches	7 inches	330
2d do	14	8½	330
3d do	15½	7	330
4th do	14	7½	330
	FREEBORN'S.		
1st trial	15 inches	5½	350
2d do	15	5¼	350
3d do	13	5½	350
4th do	15	5½	350
5th do	14	4½	350
6th do	13	6	350
	COCHRAN'S.		
1st trial	12	5½	350
2d do	11	5½	350
3d do	11	5	350
4th do	11	4	340

Sinclair's Bar share Plough, and Jenkins', having their mould boards very rusty, and there not being time to clean them, the committee thought it would be doing injustice to the proprietors to make any comparative trial of them.

But the most singular exhibition of all, and one that caused general amusement, was the spectacle of two little goats completely harnessed and attached to a cart, in which sat the driver, a man weighing nearly 200 pounds, who coursed his proud looking little steeds about with much apparent ease and security. They were perfectly tractable and true to the draft. This equipage, although intended by the worthy proprietor merely for amusement, conveys a good practical lesson to husbandmen. It shows, in a striking manner, what things may be accomplished with our domestic animals by a *proper course of education.*

The committee cannot refrain from remarking with regret, that nearly one half of the premium plate prepared and offered by the society, has not been awarded for want of competitors. The beautiful cup, for instance, offered for the best *beef*, was not claimed by any one, although good beef is an article in which our section of the country abounds, as our markets daily testify. It is hoped that this will not be the case at any future Show; but that the munificent intentions and laudable exertions of the society will be met by a corresponding confidence and zeal on the part of their fellow citizens.

Upon the whole, however, the entire exhibition was highly gratifying. Not less than one thousand spectators attended the first day; all apparently wishing well to the cause; and many of them determined to aid it by something more efficient than mere good wishes. From this auspicious commencement, your committee anticipate the happiest results: and they look forward to our next November Show as one which will still more satisfactorily develope the agricultural resources of this section of our country;—stimulate our zeal, yet farther to augment them; and satisfy all parties interested, that few, if any means are better adapted to promote the prosperity of every branch of husbandry, than well sustained Agricultural Shows and Fairs.

On the second day of the late meeting of the Fredericksburg Agricultural Society, after the business had been concluded, the Society partook of a sumptuous Dinner, prepared by Mr. J. Gray, Jr. of the Indian Queen. The President of the Society presided at the festive board, and Robert Lewis, Esq. acted as Vice-President. The following Toasts were drank, and mirth, song and sentiment, closed the delightful labours of the two preceding days:

1. *The Day we celebrate*—May each return of it invigorate our zeal, and augment our professional knowledge.

2. *Our soil and our Intellects*—We must give better culture to both, or the first will soon change masters.

3. *Free Exports and Imports*—The best security for regular demand and supply.

4. *The Congress of the United States*—Would they give Agriculture more of their works, and less of their faith; Agriculture would give them more of her money, and less of her complaints.

5. *Fair, free Trade and Universal Commerce*—The best pioneers, for liberty, knowledge, and universal good government.

6. *Prohibitory Duties, and the self-flagellations of Sancho Panza, plants from the same nursery*—A fool's cap, with ass's ears, is due to the inventors of both.

7. Moderate and competent profits to all, extravagant ones to none.

8. Steady and regular prices to every occupation, the healthful trade-winds of national Prosperity; exorbitant gain, the tornadoes that ruin them all.

9. *Our Plough-shares and our Swords*—May the first never be last, nor the last first.

10. Speed to our Ploughs, industry, skill, and honesty to their drivers; and a prudent, enlightened economy to the owners of the soil.

11. *Banks*—The most appropriate ones for Agriculture, are those erected by the Spade.

12. *The Land and the Ocean*—The value of the first, much depends on the free use of the last.

13. *The Matrons and Maidens of Confederated America*—Our last toast, but the first objects of our esteem and affection.

MR. GARNETT'S ADDRESS.

Fellow Citizens:

It affords me a degree of gratification which I cannot easily express, to behold so conclusive a proof, as this assemblage presents, that we have at last become sensible of the great benefits which may result to our agriculture from similar meetings and exhibitions, to the one now before us. And I beg leave to avail myself of the present occasion, to offer my cordial congratulations to all my agricultural brethren who may now be with us, on this auspicious commencement of our long meditated Agricultural Shows. It is true, that we have not, nor could we have, for the first time, an exhibition, to be compared with the many highly imposing, and praise-worthy spectacles of a similar character, which have, for some years past, distinguished our sister States, to the North. But we behold enough to afford us great encouragement, and a fair promise of much better things hereafter.

It would be passing strange, indeed, at a time when skill, zeal, and industry are pushing on all the other arts of civilized life to their highest state of attainable perfection, if that art, which fills the purse and sustains the sword of the nation; that art, by which, under God, we all live, and move, and have our being; which supplies not only most of the necessaries, but also of the comforts and luxuries of our existence, should be the only one neglected and despised among us. Yet this has been the fate of our agriculture, until within a few years past. And there are still some among us, I fear, who, in their infatuated reliance upon the innate energies (as it would appear) of their art, or on some other yet more incomprehensible dependence, rest, with folded arms, and drawn as it were within their own shell, without ever spending a thought, moving a finger, or bestowing a cent towards the improvement of this first and best of all occupations. Can they imagine it is all-sufficient to take care of itself, single-handed, and without any concert or co-operation among those who pursue it? Is it so unlike all other avocations and professions in life, that the insulated powers of each individual, engaged in it, will suffice of themselves to bring it to perfection? No, my friends, there cannot be a more absurd, nor pernicious notion, than the belief, that each man, for himself, can study and practice any, or all the branches of husbandry, with equal advantage, in seclusion from his agricultural brethren, as if he frequently mixed with them, and sought to realize all the benefits of their experience, as well as of his own. If such belief be not sheer madness, it is, at least, the pitiable folly of those who are far too wise in their own conceit, either to receive, or impart knowledge. As well might we expect, that the plants which are reared for human sustenance, would yield their fruit without human labor; or that the aggregate products of human industry, exercised in all the infinitely diversified pursuits of life, would be found spontaneous in their present abundance, as that the theory and practice of agriculture can be brought to perfection, or made even to approximate, in any very profitable degree, towards it, unless her sons can be prevailed upon to act more as a body, moving in harmonious concert—at least, in regard to their great leading interests. In other words, they should seek opportunities of frequently meeting together; of conferring, consulting, and combining for the general good; of interchanging the results of individual experience and observation; of encouraging by joint, but voluntary contributions, such exhibitions as we are now endeavoring to establish, with a view to elicit all that is known among us, in regard to the improvement of stock, of agricultural implements, of the various processes by which the soil itself can be best cultivated, and most effectually fertilized—and, in short, of doing every thing in their power, to elevate, to honour, and to perfect the profession to which they are devoted. With such views and objects, always present to our minds, were we zealously to pursue such a plan, for a few years, and exert, for its promotion, all the agricultural talent and information among us; instead of the afflicting prospect of deserted habitations, falling into ruins—of fields, once under culture, but now barren, desolate, and rarely trodden by the foot of either man or beast; instead of frequently having to undergo the pangs of separation from our dearest friends and connexions, compelled to seek, in distant regions, that support which our exhausted soil can no longer yield, we should behold the heart-cheering, delightful spectacle of a moral, industrious, well informed, and happy population, gradually, but continually increasing, in a ratio proportioned to the augmented fertility of our lands, and the consequent expansion and multiplication of our agricultural resources. We should no longer witness the rapid depopulation of several of the good old United States from the operation of that ever restless, erratic spirit, the general tendency of which is, to convert civilized man into a kind of wandering Arab, a stranger to all the endearing associations, connected with the words "native home;" always in search of new pastures for his herds, new forests to subdue, and new fields to wear out, as fast as the process of continually exhausting culture can destroy them. For my own part, I have always been strongly inclined to doubt our moral right to pursue such a course; for the same general law, acknowledged by all rational men, which forbids us to abuse any of the gifts of our beneficent Creator, and which we willingly obey, in taking special good care of the constitution of our bodies, ought to lead us, I think, also to take care of the constitution of our soil, as an essential means of attaining the first object. A contrary course of conduct, if pursued by all the nations of the earth, would evidently have rendered the whole habitable globe itself, in the course of a few centuries, inadequate to the support of its inhabitants. To improve our agriculture, therefore, is a moral duty, as well as a rational, agreeable and profitable occupation. In a political point of view, there is nothing in this world, the contemplation of which, can give higher animation to the hopes of the true Statesman, and swell the bosom of the genuine patriot with more pleasing anticipations of his country's prosperity and happiness, than the prospect of realizing such a state of society, as an agricultural people may form and maintain, if they will only avail themselves of all the means which are naturally connected with, and grow out of their pursuits, for the promotion of knowledge and virtue; for the security and beneficent use of property; and for the permanent enjoyment of the highest degree of earthly felicity, which social man is capable of attaining.—This, my friends, is no romantic vision; no picture, the coloring of which is borrowed from an imagination, too sanguine, in regard to what *may* be done, provided only proper means are used, and assiduously applied. It would occupy more of our time than we can now spare, to attempt even a brief enumeration of these means. Let it suffice for the present, that I earnestly entreat you to turn your attention oftener to the objects at which I have merely hinted. There is nothing can afford us ampler scope for improving reflection, nor any thing in which our temporal interests are more deeply concerned.

Although the foregoing speculations may not appear to have any immediate connexion with the purposes of our present meeting, they have been suggested by it; and as long as I have the honor to be connected with this society, I shall ever deem it my duty, to press similar topics upon the attention of its members, on every suitable occasion. If they serve no other end, they may aid in illustrating the relative importance of the agricultural portion of our people, as a component, and most material part of our great body politic; in awakening sufficient vigilance, to guard against encroachment on their rights; and in rendering them more sensitive of the too frequent attempts to legislate them into mere "hewers of wood and drawers of water." Not that I mean to charge the authors of these acts with *designing* such an effect; but if it be really produced, the purity of their motives would be but a poor alleviation of the evil.

Let me now solicit your attention, for a few minutes, to the particular objects of our present meeting; and to an endeavor, briefly to point out some of the many advantages resulting from such exhibitions; as well as to suggest a few hints, in relation to the feelings and views of those who attend them—either as mere spectators, contributors, or competitors for distinction.

We all well know the slow progress made by agricultural improvements, and the time which always elapses, before they get into general use. Our scepticism, in this respect, exceeds that even of St. Thomas himself; for we believe nothing that we hear—and require not only to see, and to feel, before we give any credit to what we are told; but rarely then, act immediately upon our belief. The History of the Carey or Dagon Plough among us, furnishes as remarkable an instance of this fact, as any that I have ever known. The two first ever brought to this town, remained in the stable yard of the Indian Queen Tavern nearly a year, before any one would even *try* them. During all this time, they lay the objects of doubt and cunning suspicion, to all the knowing ones, each fearing to meddle with them, lest he should render himself a mark of ridicule to the rest, for putting any faith in so ill-looking a tool. And there probably they would have continued for years, if an enterprising Yankee, then a resident here, had not boldly resolved, at every risk, to achieve the perilous adventure of making the first trial. Even after he had demonstrated the merit of this plough, I dare say it was nearly ten years, before it was generally used in all the contiguous parts of the country. Nearly a similar fate has attended those superior ploughs, which have been slowly superceding the Carey. One principal reason, perhaps, of this may be, that after our cobbling Smiths once get into a way of generally making a new agricultural implement, according to *their* fashion, which frequently resembles almost any thing better than the article designed to be imitated; a common opinion prevails, that this implement costs us little or nothing, because we pay for it after months, and often years of delay, in some kind of agricultural product—or, because, as it constitutes an item in that unlucky thing called a blacksmith's account, it is never paid for at all. There is so wide a difference between *this method* of obtaining our agricultural implements, and paying what is emphatically called "actual cash" for them; that the Solomons of our tribe, who are never surprised into the juvenile indiscretion of being the first to try a new thing—especially if it comes from a distance, and "*costs money*;" can scarcely yet forego the prophetic pleasure of shaking their wise heads at, and consigning to ruin the man who dares to violate this cardinal maxim of *their* rural economy. Nothing is better calculated to banish these ridiculous prejudices; and nothing more facilitates the general adoption of agricultural implements, of every kind, than the frequent recurrence of spectacles of a similar character to the present. For, on such occasions, we become eye-witnesses of most of those inventions, which mechanical skill and ingenuity have devised for our use; and of which, we either might not hear for years; or if hearing, might discredit, provided we confined ourselves, as many do, to our own farms, nearly secluded from all intercourse with our fellow citizens, but such as live next door to us. That mind has never yet been formed, I believe, which could bear such seclusion, without being contracted, and materially impaired by it. Another advantage, and by no means the smallest, evidently resulting from such associations, is, that we learn to appreciate more justly, the capabilities of our art, when occular proof is exhibited to us of what can be effected by those who follow it assiduously, under the influence of those powerful, because *voluntary* encouragements, held out to them by agricultural societies. Hence, we are naturally led to estimate more highly the power, resources, and honorable character of agricultural pursuits, in comparison with any other, instead of undervaluing them, as far too many of us appear to do. Men, in fact, must respect themselves and their profession, to obtain the respect of others. And unless our agricultural people evince their regard for their own occupation, by always asserting the rank to which they have a just claim, in the great scale of national interest, they may count with certainty, upon being degraded, not only in public estimation, but likewise in their own.

As to the feelings and views of those who attend such exhibitions as the present, in the character either of spectators, contributors, or competitors for premiums, I will now offer a few remarks. Of the first, I shall only say, that I take it for granted, they have come well disposed to be pleased with the humble effort made to interest them; and to engage their good wishes, for the success and continuance of our undertaking. In regard to the second, although I confidently trust, that we all think much alike on the subject of our institution, yet I cannot forbear to suggest, that, if they notice any thing which falls very short of their expectations, they must not be too soon discouraged; nor suffer a small failure at first, to deter them from another effort to get up a Show and Fair, which shall be worthy of the extensive and fertile country, over which our society has already diffused itself. In one year more, we may hope for such an accession of members, (the annual contribution being only two dollars,) as will considerably augment the premium fund, which we shall zealously appropriate, in the best manner our judgments can devise, for promoting our good cause; and *if we fail*, (a misfortune I will not anticipate,) it shall not be the fault of the Agricultural Society of Fredericksburg.

And now, before I conclude, I must make free to suggest a few hints, for the consideration of those who mean to compete for the premiums which we have already offered.

As our society in making this offer, have been prompted solely by their wishes to promote the general good, they have studiously endeavoured, in selecting their committee of premiums, to secure such awards as will be equally disinterested and exempt from all local or partial considerations. Should any individual competitor, therefore, be inclined to question the correctness of their decision in his particular case, I must be permitted to express my hope, that he will deem it better, silently to acquiesce in a determination which, although it *should be* erroneous, *cannot* proceed from any but correct motives; rather than impair the utility and general good effect of agricultural premiums publicly awarded, by arraigning either the judgment, or the equity of men, who must necessarily decide right in many more instances than they determine wrong. We cannot expect those who fail to obtain rewards to be equally pleased with those who gain them; but we *may* and *do* calculate on the competitors for our premiums being true and genuine friends to the cause of agriculture. And *if they are*, we can rely fully on those who may be unsuccessful, making all due allowances for their respective failures; so far at least as to acquit *our* committee of any design to thwart their particular efforts to gain the prizes at which they have aimed. I feel the more solicitous on this subject from my anxious wish that in this our first attempt of the kind, no circumstance should occur, either to produce disagreement among ourselves; or to throw the slightest obstacle in the way of our future exhibitions. Not that I fear either the competency or inclination of our committee to decide correctly: But the same thing *may possibly* happen *here*, which I see by the public Journals has taken place in one of our sister states; and I would willingly guard against it by a timely caution. The case alluded to, is one of an individual, *evidently interested*, coming forward to arraign either the judgment, or the justice, or both together, of certain judges, as *evidently disinterested*, who were selected by one of our sister societies to form a committee of premiums. This being a common cause to all agricultural societies, I must take the liberty to offer one or two general remarks prompted by the occasion. Any such instance of palpable selfishness, so far from engaging public sympathy, cannot fail to excite unqualified disapprobation. The public, whose sense of justice, will always lead them to right decisions in the end, will never take part with any individual who complains of what *he only* conceives to be an injury, and that to *himself alone*, in opposition to the decision of numerous and obviously *impartial arbiters*, who are so circumstanced, as to have *no possible interest*, either direct, remote, or contingent in deciding against him. At the worst, such a decision can only be an insulated, and single mistake, unaccompanied by any of those general consequences, which threaten injury, either to the community at large, or to any portion thereof, considered as a separate class.

I must now, my friends, bid you farewell. We have all met, as I sincerely trust, with feelings such as should ever govern men engaged in a common cause, and bound together by the ties of a common interest. Let us all part in the same spirit, to meet again, twelve months hence, with increased hopes and wishes for the prosperity of our Agriculture, as the true basis, and best security for the permanent welfare and happiness of our beloved country.

LETTER III. ON THE POOR LAWS.

Sir—I have employed more time, and been at greater trouble to maintain the positions advanced in my first letter, than their importance demanded; because I did not choose to be met at the very threshold of my inquiry by a declaration, "that however true my argument, it was founded in inhumanity and indifference to the sufferings of the Poor, and ought therefore to be disregarded." It was the more necessary that this objection should be obviated, because although the subject of the Poor Laws has occupied much attention in Great Britain, and is there well understood, and although a few of our best informed Citizens have arrived at the same conclusions, yet I do not recollect to have seen their reasoning fairly submitted in any general view to the consideration of the people. Having attempted to remove this great obstacle, it is necessary that I should refer to some of the best known principles of population.

The population of every country will increase in proportion to the increase of its means of subsistence. Where the whole produce of the lands and labour of a nation are more than sufficient for the support of its inhabitants, food and the other necessaries of life being readily obtained, every impediment to the gratification of the constant and universal desire of procreation is removed by the facility with which young families are maintained. Early and prolific marriages are the consequence of a state in which food is plenty and the means of obtaining it not very laborious. In such a state not only are marriages more numerous and prolific, but the offspring of such marriages are more certainly reared to maturity than they could be if the means of subsistence were precarious, and the labour necessary to obtain it excessive. To be assured of the truth of these principles, it is only necessary to observe the difference of the rate of increase in the population of old and new countries. Great Britain has required 56 years to double its population, while it is ascertained that the same increase is produced by procreation* alone in the United States in less than 25 years.—That this rapid increase is the result of procreation, and not (as some have supposed) of emigration, the authorities to which I have referred will prove.

But no more men can live and no more children can be raised, than can eat. It follows, then, that if the whole product of all the land and labour of any country were a fixed quantity, where the number of inhabitants amounted to as many as were sufficient to consume all the food, which the land produced or the labour could purchase, there must be an end to any increase in the number of inhabitants. Every child born and raised, then, must have subsisted on the food of some other person who was starved or died about the time that child was born. And every child born when no other person ceased to consume food, or whose parents were unable to procure for it that portion which had subsisted another, must starve. In a country so circumstanced, the desire of propagating the species, which acts uniformly, constantly and universally, which rules alike the haughtiest hero and the meanest hind, and in the gratification of which, alone, the enjoyments of the monarch and the beggar are equalized, can only be indulged in by those who have the power of depriving some other persons of their portion of food, and marriage would necessarily be confined to a very few of the most powerful and wealthy. But, the desire being equally strong in all, and only restrained by the idea of beholding their children perish before their eyes, ;the most indefatigable industry, the strictest care and the most rigid economy would be exerted by every one to secure to himself the means of life, and to arrest from others the means of gratifying his own passions. But the legitimate exertions of prudence, industry and economy, would soon give way to more lawless means of acquiring and preserving property. It is surely unnecessary to point out the crimes, horrors, and ultimate ruin which await a nation thus excessively populated.—To this state all countries at first rapidly, and afterwards more slowly approximate. —As it becomes more difficult to raise a family the poorer classes are more and more deterred from marriage, suffer greater privations, and as the rich continue to marry; are successively deprived of subsistence to maintain the offspring of wealth. A class thus deprived of the means of natural increase, as no new members are born or at least raised, to supply the places of those who die, must in time become extinct. The second and third classes in society become then the lowest, and as the same causes continue to operate, are also extinguished. But as in all countries which have been long settled, the rich bear but a small proportion to the poor, it is evident that the number of those who can marry is very small compared to those who cannot, and that this number must be continually decreasing. When a nation, then, has very nearly attained its maximum of population, the ratio of the increase of its inhabitants must be very nearly a minimum.—Thus it may require hundreds, nay thousands of years to bring a nation to that state in which no more children can be born, or rather, no more can be raised than are just sufficient to supply the places of those who die. But if in the progress of a nation to this state, and before it was nearly arrived at, a law was passed to divide all the wealth of the country equally among the whole of the citizens, it would follow that every man having the same ability to maintain a family, and the same desire to propagate his species, marriages would be unrestrained and the measure of population rapidly filled up. Independently of the injustice of such a law, which robs industry and ingenuity of their rewards, (for wealth can only have been acquired by the ingenuity or industry of its possessors or their ancestors) to bestow them upon idleness and profligacy; (for these, although not the only, are the most prolific sources of poverty :) who does not at a glance perceive the impolicy of hastening a nation into all the evils and misery of excessive population? Yet this is the direct effect of all *Poor Laws*—they take away the property of the rich to give to the poor; they increase the rapidity of population without increasing the amount of production, by enabling the poor to marry, not in consequence of having added to, but of having divided the common stock of wealth; and thus encourage idleness and bestow a bounty on debauchery by declaring that their offspring shall be supported at the general expense.—From the natural consequences of such a tax upon industry, and such a bounty upon idleness, we see England in the very hour of her triumph, at the end of a war which, whatever may have been its effects upon other nations, was to her glorious in its progress and successful in its termination; at the very time when her weight was almost doubled in the political balance of Europe; we see her groaning under a burthen which her wisest statesmen are unable to remove, and her very throne rocked by the commotion of a population, forced into life by the hot-bed cultivation of law before art and industry had won from nature the means of their support. But this example taken from a nation with which we are best acquainted, which we most resemble, and with which we are most intimately connected, will I know, have no effect upon our countrymen. They are like all men, deaf to the voice which warns them of future ill, blind to the approach of distant danger, and heedless of consequences that are remote. How long shall a grain of present good be greater in the eyes of the shortsighted, than a mountain of coming ruin? How long shall a loaf now be of more worth to the improvident than a harvest hereafter? How long shall they love a moment of present ease more than they dread an age of future sorrow? Because their country is not yet in the state of England, do they think that the same foolish policy will not have the same terrible termination? Do they hope that a miracle will be wrought for them? Do they believe that they can follow them that have gone astray and that their end will not be like *theirs?* Can they tread in the steps of the lost, and yet be saved? If they were wise, if they would weigh well what they do, the arguments in this letter, pressed home, would abolish the Poor Laws. But they will not listen, they will not learn, the experience of others cannot teach them, the miseries of others cannot warn them, and the ruin of others does not alarm them. They must feel in their own persons, the burden of misery must lye at their own doors, and the cry of anguish must be heard in their own dwellings. I know all this; and here abandon the exposition of the evils which the Poor Laws will entail upon a distant posterity; and shall confine myself in the succeeding letters to the mischiefs they produce in the present state of our country.

I remain yours, &c.
LUCIUS.

CIVIL ENGINEERING.

There is a species of talent wanting in this country, which is as rare as it is valuable. We confess our own want of it, and we most sincerely regret it, because it disables us from forming any satisfactory opinion upon those great public improvements on which hundreds, and hundreds of thousands of the public money are annually expended. We mean the talent of *Civil Engineering*. The best mode of clearing and improving our *rivers* (taking into account the present and probable situation of the country some fifty years hence) is one of those problems, which cannot be too seriously considered; because an error in this may cost the public an immense sum of money. Few people are qualified to discuss it—still fewer, to put into execution all the details of a good scheme, which they devised. He, who has the necessary talents for it, ought to be well rewarded. The salary ought to be good; and is generally good, because the talent is so valuable and so scarce. We have sometimes wished, that a competent professor would establish a school in some central and eligible situation in the U. States, for the purpose of teaching the science on proper principles. We have men to teach us the elements of gunnery and fortification—others, to teach architecture, by practice at least, if not by theory—and yet the art of *civil engineering* which is so important to this young and thriving country, is left almost to *chance medley*.

At all events a small library, consisting of the best approved authors, both theoretical and practical, American and foreign, ought to be attached to the Virginia Board of Public Works.

We conclude these hasty remarks by calling to the reader's attention the advertisement of our Secretary, to the Board of Public Works. A Civil Engineer, in place of Mr. Moore, deceased, is wanted. This situation is worthy of the attention of those, who are properly qualified.

Edit. Richmond Enq.

SENNA.

We have received for distribution a small parcel of Senna seeds from Wm. Cattell, Esq. of Charleston, South Carolina; who informs us that, "the plant is cultivated by some persons "in that state, and is found to possess the vir-"tues of the imported Senna. The leaves of "the plant are collected before they are touch-"ed by frost, and they are then dried in the "shade." We have already divided the most of these seeds amongst our correspondents, but a few are still left that will be sent to any one who may wish to experiment therewith, if early application be made to us. The best imported senna, usually sells at 40 or 50 cts. per lb. The Senna of our own country is to be found in the shops; and a neighbour tells me that he has a very fine parcel, which he has not been able to bring it into use. It is to be hoped that our men of science will encourage the agriculturists of this country, by giving fair trials of whatever their industry and enterprize may present to their notice. But of this we cannot entertain a doubt; whenever the cultivator of the soil shall produce, and offer a fit substitute for imported articles.

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* *Seybert's Statistical Annals, page* 28, *et. seq. and Edinburgh Review, p.* 364 *to* 367.

The extract which is here subjoined from Thornton's Family Herbal, shows that there are several varieties of Senna—we know not with which the American Senna corresponds, or whether it differs in colour or shape from them all, but the extract from our intelligent correspondent, at Charleston, proves that the variety cultivated in South Carolina, of which he has sent us the seed, is equally valuable, since actual trial has proved it so, and it will be seen in page 216, in a letter from Abel Seymour, Esq. that Senna grows on the margin of our rivers spontaneously, and in sufficient abundance probably, to supply the United States. There are doubtless many indigenous productions, which, if brought into notice, might be made to supply the place of imported articles, for which large sums are now *sent abroad*, and we beg to recommend this important branch of rural economy, to our country practitioners of medicine—who are for the most part enquiring, and therefore good farmers.

Edit. Am. Far.

SENNA; OR EGYPTIAN CASSIA.

Description.—The stalk rises from two to four feet, resembling a shrub, and sending out hollow woody stems. Leaves in alternate order, and compound, composed of several pair of oval, pointed, and nerved pinnæ, of a yellowish green colour. Flowers yellow, forming a spike, consisting of five petals. The pod is curved and short.

History.—It grows principally in Upper Egypt, from whence the leaves are brought, dried and picked from the stalks, to Alexandria in Egypt, and thence imported into Europe.—They are of an oblong figure, sharp-pointed at the ends, about a quarter of an inch broad, and not a full inch in length, of a lively yellowish green colour, a faint, not very disagreeable smell, and a sub-acrid, bitterish nauseous taste. Some inferior sorts are brought from other places; these may be easily distinguished by their being narrower, longer, and sharper pointed, from Mocha; or larger, broader, and round pointed, with small prominent veins, from Italy; or large and obtuse, of a fresh green colour, without any yellow cast, from Tripoli.

It has been customary to reject the pedicles of the leaves of Senna, as causing gripes and pains in the bowels; but this is a mere prejudice, for both leaves and pedicles act in the very same way.

Medical use.—Senna is a very useful cathartic, operating mildly, and yet effectually; and if judiciously dosed and managed, rarely occasioning the ill consequences which too frequently follow the exhibition of the stronger purges. The only inconveniences complained of in this drug, are its being apt to gripe, and its nauseous flavour.

These are best obviated by adding to the Senna some aromatic substance, as ginger, cinnamon, &c. and by facilitating its operation by drinking plentifully of any mild diluent.

Senna may be given in substance to the extent of about a drachm; but it is rather too bulky, and it is therefore better to divide it into two doses, and to take one half at night, and the other in the morning. It is more conveniently given in the form of infusion, which is generally made by pouring about six ounces of boiling water upon from two to six drachms of Senna leaves in a tea-pot, and letting it stand for a few minutes, when it may be sweetened, and a little milk added to it, and taken as tea, or even mixed with tea to deceive children, who will take it so; or this tea may be boiled with sliced apples with sugar with it, when it will be readily taken. Senna ought never to be ordered in decoction, Gren says, because it becomes perfectly inert, from the total dissipation of the nauseous and volatile principle on which its purgative effects depend. The tincture, on account of the menstruum, cannot be given in doses large enough to purge.

PREPARATIONS.—INFUSION OF SENNA.

Take of Senna, an ounce and a half;
——ginger, powdered, one drachm;
——boiling distilled water, one pint:—

Macerate them for an hour in a covered vessel, and strain the liquor when cold.—

OR,

Take of Senna, three drachms;
——lesser cardamon seeds, husked and bruised, half a drachm—
——boiling water, as much as will yield a filtered infusion of six ounces:—

Digest for an hour and filter when cold.

This is a well contrived purgative infusion, the aromatic correcting the drastic effects of the Senna. But the quantity ordered to be prepared at one time by the London college, is much too large, for an ounce or two is a sufficient dose. It is of advantage that it should be used fresh prepared, as it is apt to spoil very quickly.

WEEVILS—REMARKS ON THEIR HABITS, AND THE MEANS OF DESTROYING THEM.

FROM THE WEST CHESTER REPUBLICAN.

As much injury is done in barns to the different kinds of grain, by these insects, I wish the society to devote some attention to the most efficacious method of destroying them, or preventing their ravages. I have endeavoured for several years, to become acquainted with their habits, and am willing to state the result of my conclusions, hoping it may occasion, from some abler pen, more important information. *I believe they continue residents for life, of the building in which chance may place them, and that they do not migrate from one barn to another, unless carried thither.* That during the winter they lie in a dormant state near the ground. I have found numbers of them at that season on the lower side of boards which were lying under the mangers in the stables. Instinct, no doubt, teaches them at the commencement of cold weather, to seek a retreat where they may lie secure, and where they will be somewhat sheltered from intense cold. Had they remained in the mow, on threshing the grain, they being in a dormant state, would probably be destroyed. About the middle of the 5th month, May, they begin to travel, crawling up the walls, and in every direction in search of food. If any grain be in the barn, they find it; and I have seen as many as eight or ten on one grain of Indian corn, the eye of which they at first consume. When wheat, rye, or barley, is brought into the barn, they penetrate the mow, and I apprehend, deposite their eggs in the grain, which serves for food for the young insects, till they arrive at nearly the size of the parents; probably the sweating and warmth of the mow, much assist in the depositing of the egg, and in bringing the insect to perfection.

As a proof that the egg is deposited in the grain. it will be found, that if wheat be threshed some short time after harvest, in barns where weevils abound, when it will be very little eaten by them, and put into bags, and perhaps few of the insects then to be seen, that in a few weeks it will be very much eaten, and numbers of weevils in the bags. Having thus briefly stated my opinion of their habits, I will suggest a few propositions for destroying them. The most efficacious mode, I apprehend, would be to stack the grain out for one or two years, and keep all kinds of it from laying in the barn, during the summer season, by this means they would be deprived of food and of a suitable place to deposite their young.

Many of them may be destroyed by having no grain in the barn from the time they leave their winter retreat, till harvest; except about a double handful of Indian corn in a place, and in several different places. Numbers of them will go to these heaps for food, then about once in two days to riddle them in some clean place with a wheat riddle, the insects will fall through, which may be gathered up and thrown into the fire. Another method is to leave a little straw in the stables at this season, and before harvest gather it all up carefully, and draw it out into a field, many weevils will thus be taken out and will perish. It is said, though I have never experienced it, that they have a great antipathy to hemp, that a few layers of it, spread among the grain, at the time of putting it in the barn, will prevent their ravages. No doubt, members of the society, and others are possessed of facts on this subject which would be highly interesting to those who are troubled with these insects about their barns. It is hoped they will be induced, through the medium of the society or otherwise, to make them public, as it might be the means of saving many bushels of grain annually for the use of the community.

ISAAC SHARPLESS.

FOR THE AMERICAN FARMER.

SALIVATION OF HORSES.

Downing Town, 11*th Mo.* 9*th*, 1822.

I have for some years been endeavouring to discover the cause of an excessive discharge of saliva, (or what is commonly termed slobbering) from that noble animal, the horse; and from several experiments, I am induced to believe that it is occasioned by a rapid fermentation or decomposition of the food in the stomach; when an abundant discharge of this kind takes place, the horse may truly be called diseased; and in that case fermentation may go on in the stomach, for it cannot, when an animal is in health, although the process of digestion not more than half a century ago (if I am rightly informed) was believed to be merely a fermentation, but is now ascribed to the operations of the gastric juice.

Many have been the supposed causes of this common and distressing disorder, some have alleged it to be occasioned by the horse eating a quantity of insects—others that it is the effect of plaster; and some that it is produced by eating herbs that possess mercurial properties; but if the latter were the case, we would see their gums and salivary glands swelled and extended; we know that moisture and heat are the principal auxiliaries of fermentation; we know too, that these are both common and natural to the horse; and I believe it is generally admitted that some vegetables are easier decomposed than others, in consequence of their being of a less woody nature, for the nearer they approach the firmness of wood, the greater length of time it will take them to decay; the first crop of grass that grows in the summer does not make the horse slobber, unless it is a warm, wet season; the second is of a quicker growth, more watery, and not so firm as the first, and this seldom fails to produce this disease, in consequence of its being more easily acted upon than the first.

For the three last summers, the horses have suffered but very little, in this part of the country, by this complaint; the seasons have been exceedingly dry, the grass slow in its growth, very tough and hard; this fall we have had several rains that have started the grass to growing most profusely, and immediately the slobbering commenced; the frost has now checked its growth and prevented the disease.

I have sometimes given plenty of salt with very good success; it assists digestion, and prevents fermentation; second crop clover, well salted when put in the barn, lessens its powers in producing this disease considerably, though not altogether.

These hints, connected as they are with some experience, I thought, might be of use to an investigating class of farmers, and may serve to induce others of more observation, to offer their information on this head, to thy spirited subscribers.

With sentiments of respect,
I remain thy friend,
JOSEPH KERSEY.

FOR THE AMERICAN FARMER.

Respectfully Dedicated to Jeremiah Simple.

DIRECTIONS FOR SPAYING SWINE.

Frederick County, Md.

Jeremiah Simple, Esq. in Vol. 2, page 350, requested information through your valuable paper, as to the manner of spaying hogs, and was gratified by one of your correspondents, Vol. 3, page 6—but whose method I do not like as well as the one practised by a very expert hand in this part of our county, that has lately been operating on my stock, and happening to recollect friend Simple's request I was very particular in my enquiries.

My neighbour had a plank about ten feet long and a foot wide, one end of which was raised, four feet from the ground, the hog was laid on its right side, its hind feet towards the upper end of the plank, he stood at its back. With a strap resembling a stirrup leather, he buckled the hog to the plank, passing the strap close behind the shoulders.

Having two boys to assist in catching them, &c. one drew the hind legs as far back as possible without injury to the hog, the other secured the head and fore-feet. The hair was closely trimmed with a pair of large scissors from the hip bone, down towards the belly, then with a sharp knife an incision was made two inches long, to within an inch of the hip bone, through this, the pride and bag is to be drawn as described by your correspondent. After cutting the pride off, the greatest care must be taken to return the bag to its former situation; he says, more are lost from want of attention in that particular, than any other.

He then put a piece of hogs' lard in the wound, and sowed it up *very slack*. The advantage attending his mode, is, there is not the danger of rupture, which is frequently the effect of the other method. I always have a piece of the tail cut off to distinguish them from those turned out as breeders.

One of my neighbours informed me, he had an ewe spayed, that became the fattest sheep he ever beheld. If some of your numerous correspondents would describe the manner of performing the operation, it might be the means of your markets being supplied with mutton almost equal to Mr. Barney's, from the county of Frederick.

J. S. Skinner, Esq.

TO THE EDITOR OF THE AMERICAN FARMER.

PIGEONS; *a mode of Domesticating them.*

Mr. Skinner,

I observe that "a lover of squabs" is in a sad plight, and that all his "loves" desert him when they can flap their pinions. In this predicament he asks your readers to teach him how to woo them back. This interrogatory being, I presume, addressed to all, or any of your readers—I have been induced to give the result of my experience. Some years since, whilst residing on a farm, and having a "love" *like unto your correspondent*, the same measures were adopted to ensure a supply of squabs—whether I had heard, or read, that salt was a favourite condiment of that bird is not now recollected; so it was, that some how I had derived the information, that if they at discretion, had access to salt, it would not only have the effect to attach your own pigeons to their homes, but would also attract your neighbour's. Be assured that the hope of accomplishing the latter, did not actuate me to test the truth of my information—yet the essay was made in the following manner—some stiff clay, free from sand or grit, was procured, and being well kneaded up with salt water, and a liberal portion of salt grains, it was formed into a conical shape, somewhat resembling a sugar loaf, though less than the smallest sized loaves. After it was made perfectly dry by exposure to the sun and air, and sheltered during the night and wet weather, it became as a sun-burnt brick. It was then placed upon a sort of "plateau" on which grains were thrown, and to which they could have access "ad libitum." The pigeons were very fond of this preparation, and although a standby dish, some of them were generally engaged in picking at it. Certain it is, my pigeons were sufficiently domesticated, whether for this cause, I cannot say—neither can I assert that this keeping open house had the effect to prevail on my neighbours' pigeons to come over—yet if my information was correct, it is possible that some of your complainant's neighbours, may have hit upon the same plan, and thus have decoyed away his birds; and this supposition is rather confirmed, as they appear occasionally to return to their old residence, perhaps for the purpose of ascertaining whether it had yet been supplied with this hospitable loaf, which seems to serve as a sort of stimulous, or provocative to their appetites. If these suggestions should have the effect to relieve your correspondent, who appears for sometime to have been acting "*loves labour lost*," it will afford a pleasure to

RUS-IN-URBE.

Baltimore, Nov. 25th, 1822.

TO THE EDITOR OF THE AMERICAN FARMER.

SQUABS.

Your correspondent, who is a "Lover of Squabs," wishes to know how he can prevent his pigeons from leaving him. I advise him, in the first place, to prevent their being disturbed by rats, and then rub some assafœtida inside of the boxes. He will thus not only retain his own, but will be well stocked from his neighbours.

A SUBSCRIBER.

SAXON SHEEP.

We are pleased to learn, as we do from the following notice, that two choice bucks of this breed have been recently imported, to improve the flocks of fine woolled sheep in Massachusetts; and we hope that some choice Ewes, of the same breed, may be soon introduced, to multiply the opportunities of realizing the advantages that might be derived from this cross.

Edit. Am. Farmer.

From the Northampton, Mass., Gazette, Nov. 20.

Saxon Sheep.—Our enterprising townsmen, Isaac C. Bates, esq. and Col. James Shepherd, have recently imported two Saxon bucks, which have arrived in town. They were purchased in Saxony for these gentlemen, more than a year since, and selected by a good judge, as the excellence of the animals evinces. It is well known that Saxon wool commands a higher price in the English market than Spanish. It is the material of which the superfine west of England cloths are made. The growth of it, therefore, in this country, is important to the agricultural and manufacturing interests. These bucks are of the merino race of sheep, but improved. They are remarkable for the fineness, delicate softness, and singular uniformity of their fleeces, and are an acquisition to the country, for which the proprietors are entitled to a meed of thanks.

FOR THE AMERICAN FARMER.

NOTICE OF THE SESAMUM OR BENE.

Extract from a Journal, made when running the boundary line between Virginia and North Carolina before the Revolution.

As to the Olive Trees, I know by experience they will never stand the sharpness of our winters, but their place may be supply'd by the plant called sesamum, which yields an infinite quantity of large seed, from whence a sweet oyl is press'd that is very wholsom, and in use amongst the people of Lesser Asia, likewise it is us'd in Egypt preferably to Oyl Olive, being not so apt to make those who eat it break out into scabbs as they do in many parts of Italy. This would grow very kindly here, and has already been planted with good success in North Carolina by way of experiment.

AGRICULTURE

Seems to be daily more honoured in our country. Our fellow citizens most respected, from their private merits, and most distinguished by their political elevation, compete with each other for the palm of excellence in it, and engage actively in the plans for its improvement. We have seen a MADISON retiring from the Presidency to his farm, and becoming the leading Member of a society for the promotion of agriculture. The venerable PICKERING, in his advanced years, handles with equal dexterity the plough and the pen. And there is no man, whatever his merits or his ambition, who is not proud to be accounted, in the practical or even the theoretical pursuit of agriculture, the first among his equals.

This reflection suggested itself on meeting with the subjoined letter in the New York papers, from the pen of one who, in the course of his life, has filled a large space in the public eye, but seems to be now retiring from the busy scenes of life.—*Nat. Intel.*

CANANDAIGUA, Oct. 22, 1822.

To the Members of the Ontario Agricultural Society.

BRETHREN: Heretofore I have, on several occasions, unsuccessfully expressed my desire to retire from your Presidency, and become a private member of the fraternity. My solicitude arose from a belief, that the more diffusive were our honors, the more speedily would this institution rise to that elevation which our interior situation imperiously demands, and which we are certain to attain, if we are true to ourselves and to future generations.

Reasons which are beyond my control, require that a separation between us should take place.

It is known to a great portion of the Society, that I have for many months laboured under an undefined complaint, alike excruciating in its afflictions, and uncertain as to its result and termination,

In my situation, it cannot be hoped, that for months I can be active; and it becomes you to confer your highest honor on some useful citizen.

Although the irritations of a frame, worn by indescribable pains, may lead to momentary despondency, yet I feel an humble confidence, that the kind power which has hitherto sustained me through every adversity, will once more render me valuable to my family, and useful to my fellow men.

From the semi savage to its polished state, I have examined with great care and attention the progress of society, and perceive, that in every instance, its march towards real importance, is preceded by a knowledge of *husbandry* and of the *mechanic arts.*

With these opinions, I view with deep solicitude the maintenance and progress of our Society; and notwithstanding I perceive its many imperfections, cannot but hope, that the wisdom of present and future generations will perfect what we have commenced, and that important and durable benefits will result from these incessant operations. My hope is strengthened by the consideration that, although hitherto no very strong or lasting effects have been evinced among the husbandmen, yet, from the mothers and daughters of our families, we have experienced many solid advantages; and it may safely be estimated that the industry of our females, rising from this institution, already produces a yearly increased profit of fifty thousand dollars to this infant county.

Should it please kind Providence to restore me to health and action, I shall return to the bosom of your Society, and devote the remainder of my life to advance the interests of our agriculture and manufactures. For, believe me, brethren, if we effectuate those purposes, to which destiny has pointed us, it must be by bringing into our neighborhoods the arts, the virtues, and the industry of civilized life. The different orders of the actively virtuous, must be blended into one great society; man must be respected for his usefulness, not for his rank; and nothing short, can form and perpetuate a people calculated to fix the destinies of a continent.

It only remains that I take of you an affectionate farewell.

GIDEON GRANGER.

AGRICULTURAL CLUBS.

Modes of their usefulness; Compliments paid by, to Sir John Sinclair; Ribbing Clover ley, preparatory to seeding Wheat or Oats, is a useful practice.

On Friday the 5th October, the Morayshire Farmer's Club assembled (although no ordinary meetings are held in the harvest months,) for the express purpose of giving a public testimony of their respect to the Right Hon. Sir John Sinclair, for his great exertions in the cause of Agriculture. The diffusion of knowledge on this important and national subject, which he has so perseveringly and happily been the medium of promoting, justly entitles him to public esteem and gratitude. He was received and entertained by this respectable Society in such a manner as must have been gratifying to his feelings, while it proved highly creditable to the gentlemen present. The Marquis of Huntly and other county Gentlemen, Members of the Society, sent their expressions of regret at not being able to attend on so proper an occasion. Thirty-four proprietors and farmers sat down to an excellent dinner, rendered still more complete by a profusion of Moor game, and "a noble haunch" of red deer, sent by Lord Huntly from Kinrara. The evening was happily divided between instruction and hilarity; the first being promoted by several addresses made by Sir John on Agricultural topics. In the morning Sir John visited some of the principal farms in the neighbourhood, in particular Mr. Lawson's of Old Mills, Mr. Young's of Ardgay, and Mr. Mellis's of Spynic. He expressed much satisfaction at the width of Mr. Lawson's potato ridges, about three feet, by which a superior crop is obtained; and the plan of ribbing the second year's clover ley, or putting one furrow above the other, practised to a considerable extent by Mr. Young, by which in a fortnight or three weeks time the sod is so rotted, that the field can easily be rendered sufficiently mellow for a crop of wheat instead of oats; the rotting of the surface having also probably the effect of destroying the wire worm.* Mr. Mellis's stock was also much admired, and has obtained several premiums from the Society. In addressing the meeting after dinner, Sir John stated his high admiration of the exertions of the Society, who had collected the most useful works on agriculture for the use of the Members; had purchased the most approved implements that had been invented; and promoted new discovers by the effectual stimulus of premiums; and had sent one of its Members to inspect the improvements at Holkham, and to ascertain what useful hints could be procured from that great school of agriculture.—He then recommended to the Society to give premiums for the culture of carrots, sanfoin, and lucern, so well adapted for the light soils of Moray; and to promote the extension of the drill system, by introducing the drill barrow on small farms; and on large farms the ingenious machine of Mr. Checketts, of Belgrave-hall, near Leicester, which costs only from £4 to £5 each, and sows three rows. The Society resolved to order the implements, and promote the experiments recommended by Sir John, with suitable premiums. On the first Friday of November, the judges appointed to determine the sweepstakes for the best seven acres of turnips in the county, will give in their report. They will also on the same day decide the premiums to be given for the best and second-best iron ploughs made within the county, and then to be tried on a lea-field near Elgin.

Editorial Correspondence.

SCUPPERNONG GRAPES—*great yield of single Vines, and excellence of the WINE made therefrom*—FEATHER GRASS, *productive and valuable in North Carolina.*

ELIZABETH CITY, 13TH JUNE.

Dear Sir,

I did not receive your letter soon enough to comply with your wish, to have a sample of our Roanoke or Scuppernong Wine, in time for your agricultural fair. I have some, which I prefer to Madeira, made in 1814, by myself, on the island, where I purchased the grapes and prepared the wine in a proper manner. The grapes themselves are the most delicious of all others; they are indigenous, of the species of the fox, but white, larger and more luxuriant of growth. On the island, one vine serves each landlord, as it will spread as long as you will find it bearers, and 60 bushels is but a common vintage from one vine. The soil on which it flourishes, is poor and sandy, and will produce nothing but vines, and the grape is difficult to propagate on a different soil.

The island might be thrown into an entire vineyard, and would produce several thousand hogsheads.

The flavour of the wine is somewhat sweet, but remarkably rich, luscious and oily. I propose going down in September (it is only 50 miles from this) and making several casks, secundum artem. It requires skill in managing, as that made by the inhabitants, after their rude and careless manner, is by no means a fair test of the power of the grape. They do not suffer it to ferment, but add new apple brandy, to the juice just from the press. At the 3d day's fermentation, it is excellent Champaign, but few bottles can hold it in this climate. Should you or your friends want a few quarter casks, I will supply you, deliverable in Baltimore, at $2 per gallon, and will warrant it far above any American wine, or in fact, for many palates, any foreign.

We have a grass here, called Feather Grass, *Holcus Mollis*, or Soft Grass of Europe, a head of which I enclose you. It is said by some to be indigenous, and propagated from one head, accidently discovered in a branch, near Edenton, twenty years since. It is said by others, to be the same as the fescue grass of Scotland.

At any rate, it answers our soil and climate better than any other. It is extremely prolific, and bears an immensity of seed. A meadow of it, near this place, resembles a wheat field, and is as thick as it can stand. It grows all the winter, and is a very tender, succulent grass. If you have a wish to try it, I can easily procure and send you a bushel of seed this fall.

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* *This is a very old practice, called* raftering *by Tull, and in some places race-balking: it consists in ploughing the field in single furrows, and leaving every furrow-slice lying upon its own width of that which is not turned: ribbing is a term recently used for another operation, though very applicable here. One half the surface being thus rendered* mellow, *the land may be prepared for wheat, instead of lying till spring, to be sown with oats; this is the meaning of the report. Of the destruction of the wire-worms by this operation, we have no expectation.*

I am, with great respect,
Your obedient servant,
L. SAWYER.

MANGEL WURTZEL—*a large crop from less than One Acre of Land, notwithstanding the severe and long drought of the past season.*

Powelton, Philadelphia Co. Nov. 22, 1822.

Dear Sir,

The enclosed certificate, from Mr. Serrill, who surveyed the land, and the affidavit of my farmer and his assistant, who dibbled, drew, and measured the crop, will answer your enquiries in regard to my Mangel Wurtzel.

I am, dear Sir, your's,
JOHN HARE POWEL.

John S. Skinner, Esq.

We have accurately measured the Mangel Wurtzel, which grew at Powelton, upon the piece of *farm* land surveyed by Mr. Serrill, and find that there are nine hundred, eighty-two and an half bushels, of roots, *closely cut beneath the crowns, and free from dirt.* We loaded the cart in which they were hauled, and are satisfied that the load which was weighed by Mr. Armat,* was not larger than thirty others, taken from the ground to which the surveyor's certificate refers. We are convinced that the crop received *not more manure, and much less labour*, than are usually given to potatoes, in this county.

WILLIAM POWELL,
his
THOMAS ⋈ MORRISON,
mark.

Philadelphia County, ss.

******** Personally appeared before me, the sub-
* SEAL. * scriber, one of the Justices of the Peace
******** in and for the county aforesaid, the above named Wm. Powell and Thos. Morrison, who on their solemn oaths, according to law, saith that the above statement, signed by them, is correct. The aforesaid William Powell and Thomas Morrison are respectable farmers, and therefore entitled to full credit and belief. Witness my hand and seal of office, this twenty third day of November, one thousand, eight hundred and twenty two.

GEORGE HOWARTH.

Having measured the above piece of ground, I certify it contains one hundred and fifty-five and one quarter square perches.

HENRY SERRILL.

November 1822.

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* *This load, we understand, weighed* 1456 *pounds; the whole may, therefore be estimated at* 45,756 *pounds, of clean, trimmed Roots.*

Ed. Am. Farmer.

SMUT, ENQUIRIES ON THE MODES OF ITS BEING COMMUNICATED.

Albermarle Co. Va. 29*th Nov.* 1822.

Mr. Skinner,

Sir,—Will you have the goodness to give a place in your paper, to the following queries:

Is the smut communicable to wheat in the growing state, if brought into contact with it?

Is its deleterious quality affected by exposure to the alternations of the weather?

My reasons for asking the above questions, are, hat I very imprudently separated my clover seed from the straw, with my Threshing Machine, after passing a smutty crop of wheat through it; an interval of three months elapsed between the first and last operation. I took the precaution to have the barn swept out and some clean straw run through the machine before introducing the clover, nevertheless I apprehend that some smut may have been imparted to it. Shall I incur any danger from smut, under the above circumstances, by sowing the clover seed in the pug, on my wheat field, in February, and a good bed of snow?

M—— P——.

MILLET, WHEN SHOULD IT BE SOWED?

Steubenville, Ohio, Nov. 19*th*, 1822.

Mr. Skinner,

Your correspondents, who have written on the subject of Millet, *Panicum Italicum*, have generally recommended that it be sowed about the 10th of May. Owing to the great droughts which have prevailed in this country, for several years past, it has only partially succeeded—vegetating very slowly, some of it shooting into heads, whilst some of it was just coming up. Why would it not answer to sow it about the middle or last of April, when the ground is yet moist? Would the late frosts injure it? or would it rot in the ground, unless it had become sufficiently warmed by the sun? An answer to the above queries, would be thankfully received by

Your's, with esteem,
JOHN M'DOWELL, Jr.

SALES OF VALUABLE LIVE STOCK AT AUCTION,

On Tuesday, the 19th of November, near Flushing, on Long Island, at "Bayside," the Farm of Mr. Timothy Matlack, one very fine imported BULL, of the *Alderney* and *Devonshire Breed*. A very beautiful animal, 3 years old, and quite gentle.—$100. Three very fine imported COWS, of the Alderney and Devonshire breed, justly celebrated both for the quantity and quality of their milk.—$120 to $130. Two very superior full blood Heifer Calves, from the above stock, at $50 to 80.

These cattle were chosen from some of the most celebrated stocks in England, and are generally admitted not to be surpassed by any in this country.

A pair of TWIN CALVES, male and female, $100.—Half blood CALVES, by the above Bull, $15 to $20.—Merino SHEEP, EWES, at $5 to $7½.

THE FARMER.

BALTIMORE, FRIDAY, NOVEMBER 29, 1822.

PRICES CURRENT.—corrected weekly

White wheat, $1 35 to 1 40—Red do., $1 27 to 1 30—Rye, 70 to 75 cts.—Corn, 48 to 50 cts.—Oats, 35 to 37½ cts.—Flour, best white wheat, $7 37½—Howard st. Superfine, $6 87½—Wharf, do. 6 12½—do. do. 5 75—Beans, $1 25 to 1 37½—Peas, black eyed, 55 to 60 cts.—Clover seed, 9 to $10—Timothy seed, 4½ to $5—Flax seed, 75 to 80—Whiskey, from the wagons, 34 to 35 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Herrings, No. 1, $3 62½ per bbl.—No. 2, $3 37½—Shad, No. 1, none—No. 2, $6—Bacon, round, 10 to 11 cts—Straw, $12 per ton—Hay, $18

No material change in the trade or prices of Marl yand Tobacco since last report.

ROBERT SINCLAIR,

Ellicott Street, near Pratt-street wharf, Baltimore,

Having lately purchased out Jacob Grafflin's Wire and Wheat Fan Establishment, proposes in future adding those branches to his manufactory, and intends keeping ready made, all kinds of WOVE WIRE, suitable for rolling Screens, Safes, Riddles, Sieves, and Wheat Fans.

And on hand, as usual, a very extensive assortment of PLOUGHS, of all kinds and sizes, and made of the best materials—the workmanship under his own notice.

As also the much admired Daton's Self Feeding CUTTING BOX, price only $15, which will cut Top Fodder as well as straw. Also, Miner's CUTTING BOX, so much famed in North Carolina. Together with various kinds of Cultivators, Harrows and Machines to sow Wheat, plaster, and Grass Seeds, also other Drill Machines, and Corn Shellers, assorted.

CLOVER, ORCHARD AND HERDS GRASS SEEDS, together with a general assorment of Garden Seeds, many of which he has carefully raised the last year from the best sorts. He has lately received 150 lbs. of Ruta Baga Seed, fresh and pure from Sweden, it being a parcel sent in to John S. Skinner, by our fellow citizen Christopher Hughes, Jr.

IMPROVED WASHING MACHINES.

A Washing machine, invented by David Watson, made by Messrs. Bostock and Cooper, has been recently exhibited in this City, and trial made thereof at David Barnum's Hotel; where we understand it was found to be a safe and expeditious means of cleaning clothes. These machines will be made for sale at $15 each, by Messrs. Bostock and Cooper, at Washington City; who offer to sell patent rights, and will reply to any communications on this subject, if addressed to them, post paid, at Washington.

Peach-trees for Sale.

The subscriber residing at the North West corner of Market and Frederick streets, has for sale about 1000 peach-trees, consisting of the following varieties: Moor Park Apricot—Magnum Bonums—Lemon Cling Stones—White Peach with red blush, which ripens the latter end of August—Lemon Open Stones—Heath Peach—Large Late Cling Lemon—Claret, &c. &c. all which will be sold on reasonable terms.

The present owner of these trees has taken particular pains in making the collection, and from considerable experience in this business, may confidently recommend them as being very excellent of their kind.

HENRY SOUTHERN.

Wm. A Colman,

Commission Merchant and General Agent, 46, William street, up stairs.

Has for sale a valuable collection of English and American Standard Works and new publications, at London and American prices. He is Agent in New York state, for the National Intelligencer; De Grand's Report; Niles' Weekly Register. The American Farmer, for whose editors he will thankfully receive new subscriptions and payment from present subscribers. Of either the Weekly Register and American Farmer, he can furnish complete sets to persons who wish to get the whole of such valuable works, or single vols. to those who have some and may desire to complete the series.

New York City, Nov. 1822.

☞ GENUINE MANGEL WURTZEL SEED.

A few pounds can be had on application being made at the Office of the American Farmer.

PUBLISHED BY JOHN S. SKINNER.

HORTICULTURE.

THE AMERICAN GARDENER;

Or a Treatise on the Situation, Soil, Fencing and Laying-Out of Gardens; on the making and Managing of Hot Beds and Green-Houses; and on the Propagation and Cultivation of the several sorts of Vegetables, Herbs, Fruits and Flowers.—By William Cobbett.

> "I went by the field of the Slothful and by
> "the vineyard of the man void of understand-
> "ing: and lo! it was all grown over with thorns,
> "and nettles covered the face thereof, and the
> "stone-wall thereof was broken down. Then
> "I saw and considered it well: I looked upon
> "it and received instruction."
>
> Proverbs: Chap. xxiv. Ver. 30.

1. The proper uses of a Preface appear to be, to give the reader information, which may be useful, during the perusal of the work to which it is prefixed, to explain the nature and object of the work; to point out the method of the arrangement of its several parts; and, in short, to afford the means of due preparation for the task the reader is entering upon; which preparation is always a great advantage to the author as well as to the reader.

2. As to the *nature* of the work, it is, I hope, pretty clearly stated in the Title Page. The *object* evidently is to cause the art of gardening to be better understood and practised than it now is in America; and, very few persons will deny, that there is, in this case, plenty of room for improvement. America has soil and climate far surpassing those of England; and yet she is surprisingly deficient in variety as well as quality of garden products. I am not alluding to things of *ornament*, or appertaining to *luxurious* enjoyments; but, to things that are really useful, and that tend to profit and to the preservation of health, without which latter, life is not worth having. It is incredible to those, who have not had occasion to observe the fact, how large a part of the sustenance of a country-labourer's family, in England, comes out of his little garden. The labourers of England are distinguished from those of other countries by several striking peculiarities, but, by no one are they so strongly distinguished as by their fondness of their gardens, and by the diligence, care and taste, which they show in the management of them. The reproach which Solomon, in the words of my motto, affixes on the slothful and ignorant husbandman, they seem to have constantly in their minds; and to be constantly on the watch to prevent it from applying to themselves. Poverty may apologize for a dirty dress or an unshaven face; men may be negligent of their persons; but the sentence of the whole nation is, that he, who is a sloven in his garden, is a sloven indeed. The inside of a labourer's house, his habits, his qualities as a workman, and almost his morality, may be judged of from the appearance of his garden. If that be neglected, he is, nine times out of ten, a sluggard or a drunkard, or both.

3. It seems, at first sight, very odd that this taste for gardening should not have been preserved in America; but, it is accounted for by reflecting, that, where land is abundant, attachment and even attention to *small spots* wear away. To desire to possess land is an universal desire; and vanity makes us prefer quantity to quality. You may prove as clearly as daylight, that it is better, in certain cases, to possess one acre than a hundred; but where do you find the man that prefers the one acre? When large parcels of land are undertaken to be cultivated, small ones are held in contempt; and, though a good garden supplies so large a part of what is consumed by a family, and keeps supplying it all the year round too, there are many farmers even in England, who grudge even a wheelbarrow full of manure that is bestowed on the garden. To remove this neglect as to gardening in America is one of the objects of this work; and, I think, I shall, in the progress of the work, show, that the garden may, besides its intrinsic utility, be made to be a most valuable help-mate to the *Farm*.

4. It is impossible to write a book that shall exclusively apply to every particular case. Some persons have need of large, while others want only small, gardens; but, as to *Situation Soil*, and *Fencing*, the rules will apply to all cases. Those who want neither *Hot-Beds* nor *Green-Houses*, may read the part treating of them, or leave it unread, just as they please; but, I think, that it will not require much to be said to convince *every American Farmer*, North of Carolina, at least, that he ought to have a Hot-Bed in the Spring.

5. I have divided the matters, treated of, thus: The *first* Chapter treats of the Situation, Soil, Fencing, and Laying-out of Gardens; the *second*, of the making and managing of Hot-beds and Green-Houses; the *third*, of Propagation and Cultivation generally; the *three* remaining Chapters treat of the raising and managing of the several plants, each under its particular name, classed under the heads, *Vegetables*, and *Herbs; Fruits; Flowers.* In each of these last three Chapters, I have, in arranging my matter, followed the *Alphabetical Order* of the names of the several plants, which mode of arrangement must naturally tend to make the work of *reference* easy. But, as very frequent reference must be necessary, and, as the utility of the work must, in some degree, depend on the *facility* with which the several parts of it can be referred to, there are two Indexes at the end, one, of the *names of the several plants*, and, the other, of the matters generally. For the same reason, I have *numbered the paragraphs* throughout the work. A more proper term might have been found than that of *Vegetables*, seeing, that, strictly speaking, that word applies to all things that grow from the earth. But, as we call those products of the garden, which we use, in their natural shape, as human food; as we generally call *these only* by the name of *vegetables*, I have chosen that word in preference to one, which, though more strictly proper, would be less generally understood. Nearly the same may be said of the word *Herbs*.

6. Some persons may think, that *Flowers* are things of no *use:* that they are *nonsensical* things. The same may be, and, perhaps, with more reason, said of *pictures*. An Italian, while he gives his fortune for a picture, will laugh to scorn a Hollander, who leaves a tulip-root as a fortune to his son. For my part, as a thing to keep and not to sell; as a thing, the *possession* of which is to give me pleasure, I hesitate not a moment to prefer the plant of a fine carnation to a gold watch set with diamonds.

7. The territory of the United States includes such a variety of climates; degrees of heat and cold so different at the same period of the year; that it is impossible to give instructions, as relating to *time*, for sowing, planting, and so forth, that shall be applicable to every part of the country. I, therefore, for the most part, make my directions applicable to *seasons*, or states of the weather, rather than to *dates*. When I make no particular mention as to times of the year, or month, it is to be understood, that I am supposing myself at, or near, *the City of New York*, and that I am speaking of what ought to be done there. With this clearly borne in mind, the reader, who will know the difference in the degrees of heat and cold in the different parts of the country, will know how to apply the instructions accordingly.

8. Those persons, who perform their garden work themselves, will need no caution with respect to men that they employ as *Gardeners*; but, those who employ Gardeners ought by no means to *leave them to do as they please.* Their practical experience is worth something; but, if they are generally found very deficient in knowledge of their business in England, what must those of them be who come to America? Every man, who can dig and hoe and rake, calls himself a *Gardener* as soon as he lands here from England. This description of persons are generally *handy men*, and, having been used to spade-work, they, from habit, do things well and neatly. But as to the *art of gardening*, they generally know nothing of it. I wished to carry the nicer parts of gardening to perfection, at Botley. I succeeded. But I took care to employ no man who called himself *a gardener*. I selected handy and clear-headed farm-labourers. They did what I ordered them to do; and offered me none of their *advice* or *opinions*.

9. There is a foible of human nature, which greatly contributes to establish and perpetuate the power and the mischief of pretended gardeners. Tell a gentleman, that this is wrong, or that is wrong, in the management of his garden, and he instantly and half-angrily replies, that *his gardener is a very skilful man.* "That may be," said I once to a friend, who, at an enormous expense, had got two or three poor little melons, while I at hardly any expense at all, had large quantities of very fine ones: "That may be," said I, "for skill may consist in getting "you to expend your money without getting you "any fruit." The truth is, however, that it is not a desire to be deceived, that produces this species of perverseness: it is a desire not to be thought foolish. The gentleman has *chosen the gardener;* and, the reason why he stickles for him is, that, if he allow the gardener to be a bad one, he himself has *made a bad choice;* and that would be an *imputation on his understanding*, rather than allow which to be just he will cheerfully bleed from his purse pretty freely.

10. The best security against the effects of this foible of human nature, is for the owner of the garden to be *head gardener himself;* and, I hope that this work may assist in rendering this office easy and pleasant. But, to perform the office well, the owner must be *diligent* as well as skilful. He must look *forward*. It is a very good way to look attentively at every part of the garden every Saturday, and to write down some, at least, of the things to be done during the *next week*. This tends to prevent those *omissions*, which, when they have once taken place, are not easily compensated for. Seasons wait for no man. Nature makes us her offers freely; but she will be taken at her word.

11. I cannot help, in conclusion of this preface, expressing my hope, that this work may tend to the increasing, in some degree, of a taste for gardening in America. It is a source of much greater profit than is generally imagined; and, merely as an amusement, or recreation, it is one of the most rational and most conducive to health. It is a pursuit, not only compatible with, but favourable to, the *study* of any art or science. It tends to turn the minds of youth from amusements and attachments of a frivolous or vicious nature. It is indulged *at*

home. It tends to make home pleasant; and to endear to us the spot on which it is our lot to live.

Wm. COBBETT.

North Hampstead, Long Island, 1819.

CHAPTER I.

On the Situation, Soil, Fencing, and Laying-out of Gardens.

SITUATION.

12. Those who have gardens already formed and planted, have, of course, not the situation to choose. But, I am to suppose, that new gardens will, in a country like this, be continually to be formed; and, therefore, it is an essential part of my duty to point out what situations are best, as well with respect to the *aspect* as to the other circumstances.

13. The ground should be as nearly on a *level* as possible; because, if the slope be considerable, the heavy rains do great injury, by washing away the soil. However, it is not always in our power to choose a level spot; but, if there be a slope in the ground, it ought, if possible, to be towards the *South.* For, though such a direction adds to the heat in summer, this is more than counterbalanced by the *earliness* which it causes in the spring. By all means avoid an inclination towards the North, or West, and towards any of the points between North and West. After all, it may not be in our power to have a level spot, nor even a spot nearly level; and then we must do our best with what we have.

14. I am speaking here solely of a Kitchen-garden. Of *ornamental* Gardening I shall speak a little in the Chapter on *Flowers.* From a Kitchen-Garden all *large trees* ought to be kept at a distance of thirty or forty yards. For the *shade* of them is injurious, and their *roots* a great deal more injurious, to every plant growing within the influence of those roots. It is a common but very erroneous notion, in England, that the trees, which grow in the hedges that divide the fields, do injury by their *shade only.* I had a field of transplanted Ruta Baga, in the hedge on the North West side of which there were five large spreading oak-trees, at some distance from each other. Opposite each of these trees, which could not *shade* the Ruta Baga much, there was a piece of the Ruta Baga, in nearly a semi-circular form, in which the plants never grew to any size, though those in all the rest of the field were so fine as to draw people from a great distance to look at them. One gentleman, who came out of Sussex, and who had been a farmer all his lifetime, was struck with the sight of these semicircles; and, looking over the hedge, into a field of wheat, which had a *ditch* between it and the hedge, and seeing that the wheat, though *shaded* by the trees, was very little affected by them, he discovered, that it was the *roots* and not the *branches* that produced the mischief. The *ditch,* which had been for ages in the same place, had prevented the roots of the trees from going into the field where the wheat was growing. The ground where the Ruta Baga was growing had been well ploughed and manured; and the plants had not been in the ground more than *three months;* yet, such was the power of the roots of the trees, and so quickly did it operate, that it almost wholly destroyed the Ruta Baga that stood within its reach. *Grass,* which matts the ground all over with its roots, and does not demand much food from any depth, does not suffer much from the roots of trees; but, every other plant does. A Kitchen Garden should, therefore, have no large trees near it. In the spring and fall tall trees do great harm even by their *shade,* which robs the garden of the early and the parting rays of the sun. It is therefore, on all accounts, desirable to keep all such trees at a distance.

15. If it be practicable, without sacrificing too much in other respects, to make a garden near to running water, and especially to water that may be turned into the garden, the advantage ought to be profited of; but as to *watering* with a *watering pot,* it is seldom of much use, and it cannot be practised upon a large scale. It is better to trust to judicious tillage and to the dews and rains. The moisture which these do not supply cannot be furnished, to any extent, by the watering-pot. A man will *raise* more moisture, with a hoe or a spade, in a day, than he can pour on the earth out of a watering-pot in a month.

SOIL.

16. The plants, which grow in a garden, prefer, like most other plants, the best soil that is to be found. The best is, loam of several feet deep with a bed of lime-stone, sand-stone, or sand, below. But, we must take what we *find* or, rather what we happen to have. If we have a choice, we ought to take that which comes nearest to perfection, and, if we possibly can, we ought to reject *clay* and *gravel,* not only as a top-soil, but as a bottom soil, however great their distance from the surface. See paragraph 109.

17. Oak-trees love clay, and the finest and heaviest wheat grows in land with a bottom of clay; but if there be clay within even six feet of the surface, there will be a *coldness* in the land, which will, in spite of all you can do, keep your spring crops a week or ten days behind those upon land which has not a bottom of clay. *Gravel* is warm, and, it would be very desirable, if you could exchange it for some other early in June; but, since you cannot do this, you must submit to be burnt up in summer, if you have the benefit of a gravelly bottom in the spring.

18. If the land, where you like to have a garden, has *rocks,* great or small, they, of course, are to be carried off; but, if you have a *stony* soil, that is to say, little short of *gravel to the very surface,* and, if you can get no other spot, you must e'en hammer your tools to pieces amongst the stones; for it has been amply proved by experience, that, to carry away stones of the *flint* or *gravel* kind impoverishes the land. However, we are not to frame out plans upon the supposition of meeting with obstacles of this extraordinary nature. We are not to suppose, that, in a country where men have had to *choose,* and have still *to choose,* they will have built and yet will build, their houses on spots peculiarly steril. We must suppose the contrary, and, upon that supposition we ought to proceed.

19. Having fixed upon the spot for the garden, the next thing is to *prepare the ground.* This may be done by ploughing and harrowing, until the ground at top, be perfectly clean; and then, by *double* ploughing: that is to say, by going, with a strong plough that turns a large furrow and turns it cleanly, twice in the same place, and thus moving the ground to the depth of fourteen or sixteen inches, for, the advantage of deeply moving the ground is very great indeed. When this has been done in one direction it ought to be done across, and then the ground will have been well and truly moved. The ploughing ought to be done with four oxen, and the plough ought to be held by a strong and careful ploughman.

20. This is as much as I shall, probably be able to persuade any body to do in the way of preparing the ground. But, this is not all that *ought* to be done; and it is proper to give directions for the *best* way of doing this and every thing else. The best way is, then, to *trench* the ground; which is performed in this manner. At one end of the piece of ground, intended for the garden, you make, with a spade, a trench, all along, two feet wide and two feet deep. You throw the earth out on the side away from the garden that is to be. You shovel out the bottom clean, and make the sides of the trench as nearly perpendicular as possible. Thus you have a clean open trench, running, all along one end of your garden-ground. You then take another piece, all along, two feet wide, and put the earth that this new piece contains into the trench, taking off the top of the new two feet wide, and turning that top down into the bottom of the trench, and then taking the remainder of the earth of the new two feet, and placing it on the top of the earth just turned into the bottom of the trench. Thus, when you have again shovelled out the bottom, and put it on the top of the whole that you have put into the trench, you have another clean trench two feet wide and two deep. You thus proceed, till the whole of your garden-ground be trenched: and then it will have been *cleanly turned over to the depth of two feet.*

21. As to the expense of this preparatory operation, a man that knows how to use a spade, will trench four rod in a day very easily in the month of October, or in the month of November if the ground be not frozen. Supposing the garden to contain *an acre,* and the labourer to earn a dollar a day, the cost of this operation will, of course, be *forty dollars;* which, perhaps, would be twenty dollars above the expense of the various ploughings and harrowings, necessary in the other way; but, the difference in the *value* of the two operations is beyond all calculation. There is no point of greater importance than this. Poor ground deeply moved is preferable, in many cases, to rich ground with shallow tillage; and when the ground has been deeply moved *once,* it feels the benefit for ever after. A garden is made to last for *ages;* what, then, in such a case, is the amount of twenty dollars? It is well known to all who have had experience on the subject, that of two plants of almost any kind that stand for the space of three months in top soil of the same quality, one being on ground deeply moved, and the other on ground moved no deeper than is usual, the former will exceed the latter one half in bulk. And, as to *trees* of all descriptions, from the pear-tree down to the current-bush, the difference is so great, that there is room for no comparison. It is a notion with some persons, that it is of no use to move the ground deeper than the roots of the plant penetrate. But, in the first place, the roots go much deeper than we generally suppose. When we *pull up* a cabbage, for instance, we *see* no roots more than a foot long; but, if we were carefully to pursue the roots to their utmost point, even as far as our eye would assist us, we should find the roots a great deal longer, and the *extremities* of the roots are much too fine to be seen by the *naked eye.* Upon pulling up a common turnip, who would imagine, that the side, or horizontal roots extend to *several feet?* Yet I have traced them to the length of four feet; and Mr. Tull proved, that they extended to *six feet,* though he could not see them to that extent with his naked eye. But, though the roots should not extend nearly to the bottom of the moved ground, the plants are affected by the unmoved ground being near at hand. If this were not the case, plants with very short roots might be cultivated on a brick pavement with earth laid upon it to the thickness of a foot; and yet, no plant will live and thrive in such a state, while it will do very well in ground along side the pavement,

though moved only a foot deep. Plants require a communication with, and an assistance from, beneath as well as from above, in order to give them vigour and fecundity. Plants will *live* and will *grow* to a certain extent in earthen *pots*, or in *boxes* made of wood; but, there must be *holes in the bottom of both*, or the plants will die. See paragraphs 108 and 109.

22. It is, therefore, of the greatest importance, that the ground be moved to a good depth, and, he who is about to make a garden should remember, that he is about to do that, the effects of which are to be felt *for ages*. There is, however, one objection to trenching in certain cases. The soil may not only not be *good* to the depth of two feet, but it may be *bad* long before you come to that depth; and, in this case, the trenching, in putting the good soil at bottom, might bring a hungry sand, or even a gravel or clay to the top, which must not be done by any means; for, even in the case of trees, they would perish, or become stunted, because their roots would not find their way from the bad soil to the good. In such cases the top soil must, in the trenching, be *kept at the top*; and, in order to effect this, your mode of proceeding, in the trenching, must be somewhat different from that described in paragraph 20.

23. Your *first trench* must be opened in the manner described in that paragraph; but you must not then proceed to turn the *top* of the next two feet into the *bottom* of the trench. Let us suppose, now, that you have your first trench, two feet wide as before directed, open and clean. This being the case, take a foot deep of the next two feet all the way along, and, *for this once*, throw it *over the open trench* to add to the earth that you have already thrown out of that trench. Then you will have the *bottom foot* of earth left. Dig out this and turn it into the bottom of your open trench, and then the first trench will be half filled up, and you will have got your second trench open. Then go to a *new* two feet wide, that is the *third* two feet. Take the top foot deep off from this, and throw it on the *top of the* earth that you have just turned into the first trench; and then, where that first trench was there will be earth two feet deep; the bad soil at bottom and the good soil at top. Then you go on regularly. The bottom foot of the fourth two-feet wide piece you turn into the bottom of the second trench, and the top foot of the third two feet wide piece you throw on the top of the earth which is at the bottom of the second trench. And, thus, when you have done, you will have moved all your ground two feet deep, and will have the bad soil at bottom and the good at top.

24. At the *end* of your work, you will, of course, have *an open trench* and a half; and this must be filled up by carrying the earth, which came out of the first trench, round in a cart or wheel-barrow, and putting it into the space that you will have open at last. For *trees* and *Asparagus*, you ought to do still *more*. See *Asparagus*, in Chapter IV.

25. It must be observed, however, that, though the soil be good in its *nature* down to two feet deep, that which comes to the top in the first mode of trenching, will not be, *immediately*, so good for *use*, as the soil which has been at top for ages. It is, in such a case, of great advantage to place the old top soil at the bottom; because when roots find the soil good to such a depth, the plants and trees thrive and bear surprisingly. But, then, the new top soil must be exceedingly well *worked* and well and judiciously manured, in order to make it equal to the old top soil; which object is, however, very soon accomplished, if the proper means be made use of.

26. The ground being trenched, in October, ought to be well manured *at top* with good *well-rotted* dung, or with *soap-boiler's ashes*, or some other *good manure*; and this might be ploughed, or dug, in shallowly. Before the frost is gone in the spring, another good coat of manure should be put on; *well-rotted* manure from the yard; ashes; or, rather, if ready, from a good *compost*. Then, when the frost is gone, the ground will be instantly fit for digging and planting; and, it will bear almost any thing that can be put into it.

27. Thus will the *ground be prepared;* and here I close my directions with regard to the nature and preparation of the soil. But, it seems necessary to add a few words on the subject of *manures* as adapted to a garden. It is generally thought, and, I believe, truly, that *dung*, of any sort, is not what ought to be used in the raising of garden vegetables. It is very certain, that they are *coarse* and *gross* when produced with aid of that sort of manure, compared to what they are when raised with the aid of *ashes*, *lime*, *rags*, and *composts*. And, besides, dung, in hot soils and hot climates, adds to the heat; while ashes, lime, rags and composts do not; but, on the contrary, they attract, and cause the earth to retain, moisture.

28. All the ground in a garden ought *always* to be good; and it will be kept in this state if it be well manured *once every year*. Perhaps it will scarcely ever be convenient to any one to manure the whole garden at one time; and this is not of so much importance. Clay, or any earth, *burnt*, is excellent manure for a garden. It has no seeds of *weeds* or *grass* in it. A compost, made of such ashes, some wood-ashes, a small portion of horse-dung, rotten leaves, and mould shovelled up under trees, round buildings, or on the sides of roads. All these together, put into a heap, and turned over several times, make the best manure for a garden.

29. A great deal more is done by the *fermentation* of manures than people generally imagine. In the month of June take twenty cart loads of earth, which has been shovelled off the surface of a grassy lane, or by a road side, or round about barns, stables, and the like. Lay these twenty loads about a foot thick on some convenient spot. Go and cut up twenty good cart-loads of *weeds* of any sort, and lay these *well shaken up*, on the earth. Then cover the weeds with twenty more cart-loads of earth like the former, throwing the earth on lightly. In three days you will see the heap smoke as if on fire. If you put your hand into the earth, you will find it too hot to be endured. In a few days the heat will decline, and you will perceive the heap sink. Let it remain a week after this, and then *turn* it very carefully. This will mix the whole well together. You will find the weeds and grass in a *putrid* state. Another heating will take place, but less furious than the former. Turn it a second time in seven days; and a third time in seven days more. And by this time you will have *forty cart loads* of manure, equal in *strength* to twenty of yard dung, and a vast deal better for a garden, or, indeed, for any other land. It is not expensive to obtain this sort of manure; and such a heap, or part of such a heap, might at all times be ready for the use of the garden. When such a heap were once formed, some ashes, fish-shells or bones reduced to powder, or other enlivening matter, might be added to it, and mixed well with it; and thus would a store be always at hand for any part of the garden that might want it.

(To be Continued.)

Agricultural Societies, and Professorships—Internal Improvements—Domestic Manufactures, &c. &c.

The happy impulse given by the formation of Agricultural Societies throughout this Union, will be felt by persons in every pursuit and condition of life. The spirit and feelings which they are daily infusing into the mass of society, will be productive of lasting and universal benefit. The followers of the plough are now taught to look upon their profession as holding the first rank among the arts, and they are incited to place more reliance upon the discoveries of science, than upon the precepts of tradition. The Proprietors of the soil begin to *educate* their sons *as Farmers*, to fit them for their employment, as youth are prepared to follow other pursuits—by judicious combination of *practice* with theory—whilst their daughters are encouraged by the bestowment of suitable rewards upon household manufactures, to make a more productive use of their time than heretofore.

It is impossible to calculate the sum of benefits, which this nation may realise from the judicious direction of this animating spirit, that now pervades the whole extent of our country; and when we perceive many of our intelligent and worthy citizens in every state, associating to perpetuate and direct this feeling, we cannot doubt the accomplishment of every reasonable hope connected with the subject.

The union of five counties in Pennsylvania to afford a suitable Theatre whereon to display and give notoriety to improvements in Husbandry, with rewards to their authors, is but one of many incidents which have lately occurred to cheer the friends of Agriculture. On every hand we perceive auxiliaries pressing forward to crowd her ranks, and ensure success to her labours. The project of establishing a Professorship devoted to her interests in the University of Virginia, will assuredly prevail, and be imitated in her sister states; New York will not linger in this career—her government at the instigation of a Clinton, has already established a Board of Agriculture, patronized Agricultural Societies in every county, taken the lead in Internal Improvements; and her distinguished citizens are in turn prompted to individual efforts, and offerings that will shed blessings upon her population. We have there seen munificent individual patronage, extended to Agricultural Associations, we have seen the *same hand* extending its support to scientific explorations on the whole line of her grand canal—and we are correctly informed that the heart which animates, has prompted the head which guides, the philanthrophic Van Rensallear to offer to his fellow citizens a pattern farm; provided only, that their Government will accept and manage it! What may not be accomplished in and by communities thus encouraged and excited, and blessed by men whose heads and *hearts* correspond with their ample means? We were also pleased to learn that the progress of the public works, in New York, has drawn native talents to their practical school—that sons of her best and most enlightened citizens are becoming *civil engineers*, and planting their hopes of temporal welfare, upon their future ability to advance the real interests of our common country.

Editor Am. Farmer.

THE PENNSYLVANIA AGRICULTURAL SOCIETY.

A meeting of the delegates chosen for the purpose of forming an Agricultural Society, to be composed of the practical farmers of Philadelphia, Montgomery, Chester, Bucks and Delaware counties, was held on Saturday, the 19th of October, at the Buck Tavern, on the Lancaster turnpike road.

Jonathan Roberts, of Montgomery county, was called to the chair, and Stephen Duncan, of Philadelphia county, appointed Secretary.

The chairman having stated the objects of the meeting, and the advantages to be derived from the contemplated association of practical farmers residing in the counties enumerated, Nicholas Biddle, John Hare Powel, Manuel Eyre, Jesse Kersey, and Richard B. Jones were appointed a committee, to draft a constitution for the government of the Society.

The constitution having been reported, was duly considered, and unanimously adopted.

The Society being thus organized, proceeded to elect their officers for the following year.

President—Jonathan Roberts.

Vice-Presidents—Isaac Wayne, Chester county; James Worth, Bucks county; Stephen Duncan, Philadelphia county; George Sheaff, Montgomery county; William Anderson, Delaware county.

Corresponding Secretary—Nicholas Biddle, Bucks county.

DIRECTORS.

Montgomery County—Richard B. Jones, N. B. Boileau, Job Roberts, George Holstein.

Chester County—Joshua Hunt, William Evans, Moses Pennock, Joseph Kersey.

Philadelphia County—John Hare Powel, Manuel Eyre, Aaron Clement, Rueben Hains, George Blight.

Delaware County—Thomas Smith, Saml. West, Thomas Serrill.

Bucks County—William Long, Thomas G. Kennedy, Henry L. Waddell, John Newbold.

Recording Secretary—John Kersey, Chester county.

JONATHAN ROBERTS, *Chairman.*

STEPHEN DUNCAN, *Secretary.*

CONSTITUTION.

1. The Association shall be styled THE PENNSYLVANIA AGRICULTURAL SOCIETY.

2. Its efforts shall be confined to the advancement of agricultural and rural affairs.

3. All citizens of the state shall be eligible as members; any person residing out of the state may be elected an honnrary member.

4. There shall be one President—five Vice Presidents—twenty Directors—one Corresponding Secretary—one Recording—and two Assistant Recording Secretaries, who shall be elected by ballot on the third Thursday of October in every year, and continue in office for one year, or until a new election shall take place. The judges of the election shall be named by the President, and be sanctioned by a majority of the members present.

5. All the officers shall be PRACTICAL FARMERS, except the Secretaries, who may be chosen without regard to their profession or occupation.

6. The Society shall hold quarterly meetings on the second Saturday (7th day) of January (1st month), April (4th month), October (10th month), and the fourth Saturday, (7th day of July (7th month), for the transaction of their general business; and one annual meeting for the purposes of an EXHIBITION and CATTLE SHOW.

7. The quarterly meetings shall be held at Norristown, in the county of Montgomery. The annual meetings shall be held successively and in the following order, in Montgomery—Chester—Bucks—Delaware and Philadelphia counties, at such places, not less than *ten miles distant from Philadelphia*, as shall be determined by the Directors.

8. A quorum of the Society shall consist of not less than ten members, including the President or a Vice-President.

9. At all meetings the President shall preside; in his absence a Vice-President; in the absence of all the Vice-Presidents, the oldest Director shall perform the duties of the chair.

10. The President, with a majority of the Vice-Presidents, shall have power to call special meetings of the Society; but such meetings shall be announced by the Recording Secretary in one newspaper in each county, and two newspapers in the city of Philadelphia, at least ten days before the time at which it is to be held.

11. The President, Vice-Presidents, and Corresponding Secretary shall ex-officio, be members of the Board of Directors, who shall have full power to hold the annual exhibitions, to make and carry into effect all arrangements necessary therefor, to award such premiums as shall have been offered by the Society, to complete all business arising therefrom, and to determine all matters connected therewith. The President shall sign such orders on the Treasurer, as they, or a majority of them, shall have drawn in the performance of their duties.

12. With the Directors shall rest the care of all the Society's property, except their funds, books and papers. It shall be their duty to examine all accounts—to inspect all communications before they shall be read at any of the quarterly meetings; to collect and communicate information touching improvements in husbandry, or implements employed in its operation.

13. The Treasurer shall collect all monies due to the Society—pay orders drawn in due form—keep the accounts regularly stated in the books of the Society, and when required, shall produce them at any stated or special meeting.

14. It shall be the duty of one of the Recording Secretaries to give such aid to the Treasurer in keeping his accounts, collecting the subscriptions of the members, and paying the debts of the Society, as he shall require.

15. It shall be the duty of the Corresponding Secretary to revise all reports and communications before they shall be made public by authority of the Society.

16. It shall be the duty of the Recording Secretary to preserve the books and papers of the Society, and to attend, or cause one of his assistants to attend, all its meetings; and in like manner to keep the books and papers, and to attend the meetings of the Board of Directors.

17. Every member shall pay to the Treasurer two dollars annually.

18. The quarterly meetings are hereby authorized to make such by-iaws and regulations as shall be deemed necessary, and not inconsistent with these fundamental laws; but no fundamental law shall be altered or repealed, nor shall any new fundamental law be added, except at one of the quarterly meetings, and after notice shall have been given at the preceding quarterly meeting of the proposed alteration, repeal or addition.

FROM THE CINCINNATI (OHIO) INQUISITOR.

THE FUNDING SYSTEM.

That it may not be considered mere declamation, what we have hitherto said upon the funding system, we proceed to give some account how stock is created; in the progress of which we hope it will plainly appear to our readers that nothing can give the executive government so great a degree of illegitimate power and undue influence, as borrowing money and creating funds: and we are confident that it is only necessary to lay open the plan and scheme of the system, to convince the most superficial politician of its mischievous tendency, both in making the government independent of the people, and greatly increasing the public burthen of the nation.

When the minister requires a supply of money, he gives notice in Parliament that a loan will be wanted to a certain amount, and after obtaining the vote of his minions for raising the money in that way, he gives notice in the Gazette that he will receive proposals for the loan upon a certain day. On the day appointed, the proposals are opened, and the purchaser, or rather the lender, is declared.

Though it is but seldom that one person, or one house, can take the whole loan on their own account, it is common for one person, or one firm, to bid for the whole and take in subscriptions from others to make up the sum required; and in order to suit the subscribers, the stock will consist of three per cent. consols, and of long or short annuities. The loan is usually made so that the money may be paid in by instalments at different periods, under the penalty of forfeiting the instalments paid, on failure of paying subsequent ones at the times appointed. By this means, time is given for the purchasers to obtain subscriptions to make up the whole sum, during the period from which the loan is agreed for to the time the last payment is made. Those who have subscribed often sell to others their share or a part of it—and it sells at a profit or a loss in proportion as the terms made with the government have been considered good or bad. Thus, if the terms have been considered good, it will bring a premium per centum, and if bad, it will be subject to a discount. When this last purchaser buys from the original subscriber the whole of what he is possessed of, or a proportional share of it, including 3 per cents. annuities, &c. it is then called omnium, which means all the different kinds of stock. And when we are told that omnium bears a preminm of 2, 3, or more per cent.: we are to understand that the whole of the stock purchased has been a good bargain for the purchasers, and of course a bad one for the government. If the last purchaser buys from the original subscriber any particular kind of stock, say 3 per cent. consols, or annuities, (long or short,) that is called scrip, which may also bear a premium, or a discount according to the advantage or disadvantage of the bargain. These secondary purchasers are, in all respects, placed in the situation of the original subscriber, as to the payment of instalments, forfeitures, &c. and at the winding up, or completion of the loan, they have their names entered on the books of the bank of England, where the accounts are kept, as being the proprietors of the stock they have thus purchased.

That kind of stock called 3 per cent. consols, consists in money advanced to the government, for the payment of the interest of which the revenues of the country are pledged; or, to use technical terms, the interest becomes chargeable upon the consolidated fund—hence the abbreviation consols.

That kind of stock called long or short annuities, consists in money advanced to the government, for which a certain annuity is paid for a certain number of years. For 30 years, it is called a short annuity; for 60 years, it is called a long annuity. And the money is sunk, the debt becoming extinguished at the end of the period mentioned.

The difference, therefore, between consols and annuities is, that for the interest of stock in the former, government is forever bound, till the principal shall have been paid off; the latter is paid off and extinguished when the years expire for which it had been granted. And as the principal vested in the annuity is sunk, a larger rate per cent. is given for it per annum, than the interest in consols amount to.

Three per cent. may be considered a very small interest for money, and those unacquainted with the subject may be surprised that money would be vested in a fund for so small a consideration. But though at the commencement of the funding system in England money was actually had at that rate, yet, from various circumstances, that species of stock fell so much below par that the purchasers have, on some occasions, had upwards of 6 per cent. for the money vested in them. Thus, when 100*l.* in 3 per cent. consols, could be purchased for 48*l.* the purchaser would have 6¼ per cent. on his money. From the legal interest of money being now 5 per cent. 3 per cent. consols are supposed to be at par when 100*l.* in that stock will bring 60*l.* in the market; because the interest of 100*l.* stock will bring exactly the interest to which 60*l.* is entitled at 5 per cent. The market price of stock, therefore, at the time a loan is negociated, is always taken into consideration by the minister: and if the 3 per cents. are then at 60*l.* the money borrowed will be estimated accordingly; and for every 60*l.* advanced, 100*l.* in stock is created. Or, in other words, for every 60*l* advanced, the lender obtains a claim on the government for 100*l.*

For thus augmenting the principal of the debt, and diminishing the interest, the friends of government contend as a wise measure. Those opposed to them, say otherwise; and a third party say it is of no consequence—all being equally mischievous.

In negociating loans, however, there is another item introduced, called bonus, or douceur, which is a something given above the exact calculation of the terms proposed, by which it has frequently happened that from one eighth to one per cent. has been given to lenders above what the terms appear to offer.

There is another species of stock, which is created by the issue of exechequer and navy bills during the recess of Parliament, and which are put into circulation on the credit and responsibility of the minister. These bills are made payable with interest at 5 per cent., sometimes from the day they are issued, and sometimes bearing no interest till some months after their date. Formerly, those bills were issued during the recess, and payable when sanctioned by Parliament at its next meeting. The cause of their issue was, that the funds had been exhausted, and to prevent the operations of government from being retarded. And as it was well known that the minister was always sure of a majority in Parliament, the utmost confidence was placed in exchequer and navy bills. They were, therefore, paid shortly after the meeting of Parliament. But latterly, when the resources of the country became embarrassed, instead of paying off those bills, they were what was called funded; that is, they were taken out of the hands of the holders, and in return they obtain three per cent. stock. Those navy and exchequer bills, when floating, were called the unfunded debt; and to such an amount were they in circulation, that the true amount of the debt could never be known to the public; because, when any account of the funded debt was published, the unfunded debt was unknown. In some cases the unfunded debt has amounted to more than the present debt of the United States.

By means of those exchequer and navy bills, the minister has been enabled to obtain loans without the formality of Parliamentary sanction. And in time of peace, when loans are unpopular, he has, in this covert manner, raised money without even the observation of the people, who might have raised a clamor against borrowing at a time when they ought to be paying.

Such has been the power and influence given to the British Minister by the destructive system of funding—an influence which is as incompatible with the liberties of the people, as ruinous to their true interests. By means of the funding system, the minister is rendered independent of the people—It enables him to engage in wars which he could not otherwise attempt; for he can raise as much money in one year by that means, as the regular revenue of the country would produce in seven, and thus the interests of the country are sacrificed to the ambition or the avarice of the minister.

The stocks being transferable, any holder of stock, though he cannot obtain payment of the principal from government, may, notwithstanding, by selling out to another, procure his money. This species of traffic is very common among those who buy and sell in the stocks and make actual transfers, as well among a kind of gamblers who dabble in the stocks to the amount of many thousands, though they may not possess stock of any kind to the amount of one shilling.

The bank of England having made a contract with the government to keep account of all the stocks, it is at the Bank that all transfers are made. When a sale has been made at the stock exchange, the parties go to the bank, and the seller, producing the proper certificate of his being the owner of a certain kind of stock, orders his name to be stricken out, if he has sold all his stock, and the buyer's name to be substituted. Or if he has sold out only a part of it, such part is deducted from his account, and the name of the purchaser inserted for that amount, and the purchaser obtaining a certificate, the bargain is concluded.

The business of stock-jobbing, or gambling in stocks, is conducted as follows: The jobbers meet in the Stock Exchange, and vociferate through the hall what they want to be at, either as buyers or sellers. When a buyer and seller come together, they agree upon the terms and the kind of stock they wish to deal in, and also upon a settling day, which may be a week or a fortnight hence; and on this settling day, the bargain is concluded by the one paying to the other difference in price which that stock bears to that on which the bargain was first made.

Thus, if the buyer, or the bull, as he is called, agrees with the seller, or the bear, for a certain amount, say 1000*l.* in 3 per cent. consols, suppose at 66 per cent. delivery to be made one week hence, and if, on that day, as appointed, the same stock can be had for 65½ per cent. then does the bull pay to the bear ½ per cent. upon the sum agreed for, or 5*l*—but if, on the contrary, the stock has risen to 65½ per cent. then does the bear pay to the bull ½ per cent. or 5*l.* and the business is settled without any actual transfer of stock being made. Thus it appears the bargain is a mere bet, of an indefinite nature, that stock will be higher or lower on a given day; and that the amount of the loss or gain will be in proportion to the rise or fall of the stock: and if there be no difference the bet is drawn. As the rise and fall of the stocks depend upon the political state of the country, and its relation to foreign countries, an opening has been given to intrigue; and frauds, to large amounts, have been committed. These frauds are practised by having paragraphs inserted in the newspapers, both at home and abroad; and, on some occasions, whole newspapers have been forged for the purpose, as happened once during the American Revolutionary war, and once during England's last war with France. By these means immense sums were lost by some, and gained by others. When those jobbers refuse to make good their losses, they are posted up as defaulters; or, as the cant phrase is, they are lame ducks, and waddle out of the alley. They are not afterwards suffered to enter the stock exchange. But if they give up their property, under a compound, it will be accepted of, and they have leave to proceed as before. Banishing defaulters from the stock exchange is all the remedy that can be obtained, as the law does not recognize this species of stock-jobbing more than any other kind of gambling, and will not enforce the payment of any loss thereby.

LETTER IV. ON THE POOR LAWS.

Sir—I promised in my last letter to consider in this, the objections that are fairly applicable to the system of Poor Laws, in the present state of our country. The great truths to which I have before casually alluded, and which I wish to impress most sensibly on the minds of our Fellow Citizens, are that no charity does, or can possibly, relieve the state from the evils of Pauperism, and that every such establishment, increases those evils in a degree proportioned to the extent of the offered relief.

Charities as established by law, are intended to provide subsistence for all those the wages of whose labour is not sufficient for their support; and who have not other means of procuring the necessaries of life. To provide the fund for these charities the whole wealth and labour of the state is taxed; and a promise is solemnly given, that whenever any person shall require the assistance of this fund, it shall be afforded. This promise, as long as the Poor Laws continue in force, can never be violated. A certain, permanent and sufficient stock awaits every man who has been reduced to poverty; and it is of no consequence whether his distresses have resulted from unavoidable misfortunes, or are the effects of the most disgraceful and disgusting vices. And the whole state is equally pledged to support every woman, and to rear and provide for all her children, whether she be virtuous or abandoned, whether they be legitimate or illegitimate. Should the father of a family declare by a solemn and irrevocable act that his fortune, his parental affection, his caresses and endearments, should be equally divided among all his children; and that the obedient, and the disobedient, the virtuous and vicious, those who became worthy men and women, and those who turned scoundrels and prostitutes, should share alike his care and support; what voice would not be lifted up against him as a destroyer of the morals of his children, an encourager of vice, and a participator of their infamy? It has often been said that a good king is the father of his subjects; we have no kings, but our laws stand for us in the place of a king. Our laws should be the father of the people, but they promise to bestow their protection and support, when poverty requires them, equally upon the good children and the bad. It is this certainty of experiencing the state's bounty, this indiscriminate extention of relief to every species of want, that has filled the wards of our Poor Houses, and continues daily to increase the number of our paupers. Scarcely one man can be found to whom a life of ease and pleasure is not more desirable than days of toil and nights of anxiety. "Venter artium magister, ingenique largitor." But hunger does brighten a man's invention more than it arouses his bodily exertion; its effect is as great in producing corporeal activity, as in exciting mental energy. It is equally a spur to labour, as a whetstone to wit. Why is it that young men possessing large fortunes indulge in idleness, dissipation and extravagance, while those in humbler stations are sober, industrious and careful? Is it not the certainty of plenty which relieves the first from care, and the fear of want which restrains the inclinations of the last, and fixes a curb upon their passions? Relieve them of this fear, assure them that no misconduct on their part, no idleness, no extravagance, no vice shall ever reduce their comforts; bestow on them the purse of Fortunatus, which some invisible hand replenishes with gold as fast as it is exhausted, and are they not at once released from every obligation to industry and economy? Will they not vie with the wealthiest in expensive gratifications? The Poor Laws are to the lower classes of society, the purse of Fortunatus. What man is there, whatever his habits may have been, however steady, industrious, prudent and economical, however great or small his fortune is, who would persevere with the same diligence and attention in improving and preserving his estate; if he were assured, beyond the possibility of a doubt, that as soon as his wealth was squandered he would be provided with a more ample supply? Would not the same carelessness of consequences operate equally upon him who is worth a single dollar and upon him who is worth a million? Would not each unhesitatingly dissipate his wealth in the indulgence of a passion, or the gratification of a whim, assured that his situation could not be made worse, but might be improved, by the receipt of the second fortune, which is held in store for him; but which he cannot touch until the first is expended? No fund has yet been found sufficiently great to replace the waste of princely fortunes; but by the Poor Laws, ample provision has been made for the complete restoration of more moderate wealth. The estates of the labouring classes do not consist in lands, slaves and money; but in health, strength and industry. The assiduous cultivation of these estates does not produce magnificent palaces, splendid apparel and sumptuous feasts; but it provides comfortable lodgings, necessary raiment, and wholesome food; thus supplying every comfort to those, to whom habit has not rendered luxuries necessaries of life. These estates, this health, strength and industry, the poor are encouraged by law, to squander in the indulgence of every vicious excess; to dissipate by lust, drunkenness, and debauchery, and to waste in inactivity and idleness, since they are positively assured that when all shall have been spent, they will be restored to every comfort of lodging, dress and food, provided without labour or trouble on their part; and more amply and more certainly provided, than they could have been by their own most indefatigable exertions in their best days. The situation of any poor man, who labours for his daily bread is much improved in respect to the real necessaries of life, by declaring himself a pauper and removing to a Poor House. And if the poor do not flock to those establishments in still greater numbers than they have done, it is not because the inducements held out by the law are not sufficiently strong: other causes, on which it has not yet produced its full effect, but the operation of which is daily becoming more and more feeble, have hitherto prevented them from profiting to the utmost, by the foolish liberality of the law.—Our country is yet young; and the establishment of Poor Houses is yet a new thing among us.—Pride, shame, and the love of unrestrained liberty still cause many to submit to privations which would be removed by consenting to receive public charity. But it cannot be expected that these causes will operate long against the pressure of poverty and the seductions of the law. Pride cannot long support itself under the burthen of necessity. Shame becomes less dreadful, as the frequency of submitting to it renders it more familiar; and even the love of liberty yields at last to the gnawings of hunger, and the torture of cold. The Poor Laws are continually undermining the strength of these feelings, because they are continually holding out inducements and arguments to the poor to reduce themselves to that situation, in which this strength must be weakened, in which these feelings are to be struggled with, and in which they must eventually be overcome. When a laborer wishes to enjoy a day of ease or of pleasure, the inclination would be repressed by the thought, that, that day devoted to labour would furnish him with the means of support on some other day, when disease or age would prevent his working; but the law kindly says to him, 'indulge yourself to-'day, you may, perhaps, never feel the loss of the 'money you might have earned, but if you should, 'I will make your wealthy neighbours pay you 'for a full day's work.' This reasoning repeated a few times becomes familiar, and is often acted upon; it cannot be fallacious, for experience teaches him that its promises are always fulfilled; frequent indulgence becomes confirmed habit; and the law has converted an active industrious citizen, whose labor might have provided a comfortable support for his old age, into an idle, worthless vagabond, whose pride, and sense of shame, and love of freedom, however great they once were, must now yield to the more imperious calls of hunger. Again: a poor man is tempted to indulge in some unnecessary expense; perhaps a piece of finery for his wife, or more common and more dangerous still, a jug of spirituous liquors for himself; the dread of future want might be sufficient to check this useless and pernicious extravagance; but again, the law steps in, with its generous and wise humanity, to fix his wavering resolution by an inviolable promise, that whatever he expends in muslin for his wife, or whiskey for himself, shall be repaid him in comfortable lodging, warm clothes, and wholesome food, from the coffers of those on whom Fortune has too lavishly bestowed her smiles. Temptations like these cannot fail of their effect, the finery is bought and worn; the spirits are procured and drank. The same desires again arise, the same objections to their gratification occur, and are obviated by the same triumphant argument; till, at length, when we should have seen a respectable couple, supported by the labour of decent and affectionate children, the Poor House receives a tawdry trollop and a bloated drunkard, whose offspring, reared in idleness, and familiarized to vice, must run the same course and reach the same goal. "I can but go to the Poor House at last" is the reply constantly made to every caution against drinking, to every exhortation to industry, and to every threat of future want. In my next letter, I shall pursue this subject farther.

I remain yours, &c.

LUCIUS.

BUTTER—RUSSIAN MODE OF MAKING—A NEW DISCOVERY.

FROM THE NEW-YORK AMERICAN.

Sir,—Observing in your paper last evening, a communication from Mr. Hugh Hartshorn to J. S. Skinner, Esq. on the subject of making Butter in Winter, I beg leave to furnish a few particulars on that subject, as practised in Russia, since the year 1816, and which may, perhaps, be of some service to those who may be induced to make the experiment, either in Summer or Winter. Being in that country in the year 1817, I was informed by a Russian Nobleman that the proprietor of an extensive estate (also a Nobleman of high rank) had discovered a new mode of making Butter, and had received letters patent from the Emperor as a reward for the discovery, and which he stated as being at that time in full and successful operation. The process consisted in boiling (or rather that species of boiling called simmering) the milk for the space of fifteen minutes in its sweet state—observing at the same time not to use sufficient heat to burn the milk; it is then churned in the usual manner. He also stated that no difficulty ever occurred in procuring Butter immediately, and of a quality far superior to that made from milk which had undergone vinous fermentation; and that, in addition to its superior flavour, it would preserve its qualities much longer than that made in the ordinary mode; that the additional advantages were, that the milk, being left sweet, is possessed of almost the same value for ordinary purposes, and by some was considered more healthy, as they supposed the boiling or scalding to destroy whatever animalculæ it may have contained.

If the above process should upon experiment prove of sufficient importance, so as to bring it into general use, particularly in the winter, it would perhaps be to the advantage of those who may practice it to have their milk scalded in vessels calculated to stand in the kettle or boiler, by which mode the danger of burning the milk would be avoided, for it is ascertained that milk only burns on the edges of its surface, or where it comes in contact with the sides of the vessel in which it is heated, which can never happen in double kettles, or where one is placed within the other.

A SUBSCRIBER.

December 5.

WHEAT—*from the straw of which the Leghorn Bonnets are manufactured.*

In corroboration of the many proofs of effectual attention to the interests of American Agriculture, by the officers of our navy, we have just received, from a young and very meritorious officer in that service, a small parcel of the wheat, which produces the straw out of which the Leghorn Bonnets are manufactured, accompanied with an interesting account of a cruize in the Archipelago. The writer, remarks, in relation to this wheat, the manner of cultivation and the soil on which it grows, may prove useful, and go to show that many parts of our country are adapted to its culture.—*Ed. Am. Farm.*

"Schooner Nonsuch,
"Gibraltar, August 8th, 1822.

"*Dear Sir*,

"When at Florence, I obtained from our Vice-Consul, some of the wheat that produces the straw used in making Leghorn Bonnets, and have directed a small parcel to you, with a request to Mr. Sprague to forward it by the first opportunity. I saw much of this wheat growing on the road to Florence; it was seeded on barren, hilly land, and so thick as to prevent its growing large. It is pulled up by the roots, as soon as it heads—the top joints are made into small bundles and exposed to the sun during the day, but taken out of the dew at night, in order to preserve its rich, fine colour. I have no doubt but it would succeed in the United States, if proper attention was paid to it, unless the climate should be unfavorable for preserving the colour. Our stay at Leghorn was so short, that I had not time to visit any of the manufactories, but suppose the mystery of joining the plaits together, could be easily ascertained. If a manufactory could be established in the United States, it would be highly desirable, and I should not suppose the difficulties attending it insuperable."

Editorial Correspondence.

TO CURE NEAT-CATTLE OF THE MANGE.

Pennsylvania, *April* 12*th*, 1822.

Dear Sir,

When your Cattle have the mange, cause them to be well washed with soap—at night, give half an ounce of nitre; repeat it the next morning. If the weather be good, rub *well* on all the parts affected, some ointment, prepared by the subjoined recipe—let them be kept under cover for two days and nights, then turn them into a field where they can *run*, produce *sweat* and *rub themselves*; if necessary, repeat this treatment. This disease sometimes attacks the fat, and the thin. I have never failed in attempting a cure, and within five weeks. Pinch the tail throughout, if any soft place be found, *slit* it with a sharp knife so far as the softness extends. I know from an accurate observation, during four years, and minute investigation of the practices of the best graziers, (with whom I have much to do) that such state of the tail *is proof* of tendency to "hollow horn." I mean that the "tail rot," as it is called by Downing, the English Cow Leech, is a symptomatic disease indicative of some affection of the spine, which generally produces a more fatal malady, *accompanied* by hollowness of the horns.—A small quantity of white mucus, or serum like stuff, exudes generally from the incision.

In New England, they all cut off the tails.—I cut off the long hair, at the ends, but never remove any portion of the bone, although I do not hesitate at pushing a sharp knife through the soft parts of half a dozen calves or cows tails in a morning. I have seen an animal on her side, which, within half an hour, was led to rise and after eat, merely by cutting off three inches of the tail. Some of the best Surgeons to whom I have spoken, think that my notions are perfectly consistent with the received opinion of the connexion between the spine and tail of a quadruped. The remarks of some of the old Farmers of this county, excited my ridicule on this point, at first. They go so far as to assert, that the tail is injured by treading on its end when the animal makes an effort to rise—the most skilful farmers, and the most celebrated in this neighbourhood, among us fellows who do not faint at smells, cut off the hair for the reason I have given.

I would be glad to welcome Mr. C******* here. The finest grazing land in the Atlantic States, *I think*, is the alluvion on the West Bank of the River Delaware. And the best Grazing Farms could be purchased on its margin, at very moderate prices.

I have a letter from Massachusetts, saying that Cœlebs had 52 cows at $10 each.

Ointment for the Mange.—Hogs lard, 2 lbs.; spirit of turpentine, half a pint; oil of vitriol, 2 ounces, to be well mixed; after add brimstone in fine powder, half a pint.

My cattle all take from one to two ounces of salt daily in their food—once in a fortnight, half an ounce of salt petre.

MANGEL WURTZEL—*the mottled best; and this crop far better than Turnips.*

EXTRACT OF A LETTER FROM JUDGE PETERS.

Belmont, 8*th July*, 1821.

Dear Sir—I have cultivated the Mangel Wurtzel, for a period of more than 30 years; and have been mortified to find how little sensible the generality of farmers have been, of its superiority over any other root raised for the sustenance of stock. Turnips, the Ruta Baga included, are very contemptible in comparison with it. The leaves in summer, and the root in winter, give it a double advantage. I prefer the mottled root, and the more it grows out of the ground, the better.

I had the Flemish, or yellow Mangel, for several years. But I found them inferior, in every respect, to the mottled kind. The leaves were bitter, and not relished by my milch cows. The root was too bulbous, it grew, for the most part, under ground, throwing out unprofitable fibres. I have no present knowledge of any place where a supply of seed can be had; but if I can hear of any I can depend on, I will inform you with pleasure, for I wish to aid in its general cultivation; to which, placing it in your hands, would highly contribute.*

I was delighted with the accounts I received of your Cattle Show, and the exhibitions accompanying it. One such display is better than volumes, written for the instruction of those who will not read or believe in them.

Very truly your's,
RICHARD PETERS.

John S. Skinner, Esq.

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* *Mr. Robert Sinclair, Seedsman, Baltimore, has some of genuine kind, he saved this year, from roots which he transplanted. It has been well remarked to us, by the Sage of Wenham,* "*that in Essex, England, it is on* strong land, *and this, too, manured in the drills, that such heavy crops of this root have been raised; the seed having been sown early in April:*" *and on this latter circumstance, he laid great emphasis, as he had himself been twice disappointed by sowing too late.*

Ed. Am. Farmer.

DRAINING AND IRRIGATION—*our farmers ought to hold these modes of improvements in high estimation.*

EXTRACT FROM PETERSBURG, VA.

"Our Southern country can never attain its proper character for agricultural improvement, until a *general* and proper system of Drainage and Irrigation, is introduced. These subjects, and the use of Artificial Grasses, in my opinion, at this time, claim the attention of all farmers.

"There is, indeed, a very general determination to abandon the scratching of old, worn out high lands, and to clear up and bring into action, the slashes, swamps and low places, which have been the refuge for ages, of all the soil so industriously scraped up on the high land. Of those who have already commenced these operations, but too many, however, go to work without a proper examination of their land, and are often deceived in their hopes, by not properly draining, or neglecting to irrigate their ground. The universal system is to dig a deep, wide ditch, in the lower part, calculating upon all the water getting into it some how or other; and sometimes this so effectually dries the land, that it is unfit for the purposes of meadow; at others, the nature of the ground prevents, in this mode, a sufficient drainage. It must certainly sometimes happen, that shallow ditching is best, and this not confined to the lowest place, but carried round the sides of some slope, whence the water is to be discharged upon the land below. But I have adverted to these circumstances, merely in the hope of inducing you to lay these subjects before your readers, in the hope that some of your deserving and intelligent correspondents, might thus be prompted to demonstrate the advantages which naturally follow in the train of such salutary and fertilizing improvement.

A—— M——.

FINE TOBACCO MAY BE MADE ON OLD LAND.

Baltimore, 4*th Dec.* 1822.

Dear Sir,

In the fall of the year, plough up your ground as deep as you can, "first sprinkling your manure on the surface;" let the field lay in this state until the opening of the spring, then plough it again and harrow it well, to get it into a loose, mellow state; when this is done, list it as you would prepare land for corn planting, but only about 2½ feet wide, throwing your furrows against each other; by this process, you form a ridge sufficiently elevated to enable you to make your hills on it, which is done by one stroke of the hoe, and a pat on the top of the hill. Let your hills on the elevated ground, be only 12 inches apart—when your hills are thus formed, set out your plants as soon as you can. It will be a great saving to manure in the drill, which will answer every purpose. By this process, your tobacco will grow well, and when ripe will put on a yellow appearance in the field. Thus treated, it is easily kept clean, and when housed, it will cure nearly as yellow as Tobacco raised on new grounds, and the crop be more abundant than in the usual way. This method has been fully tested, and found to answer every expectation; and old grounds have been thus made to yield equal to new land, and nearly as good prices have been obtained for their produce. This being the case, as I am assured by persons who have tried it, on whom I entirely rely, the culture may be immediately very profitable to our planters, and as much so remotely, by saving timber from being wastefully cut down, as it now is, for the purpose of making yellow Tobacco. The saving of timber has become an object of much importance, already in many parts of our country. I hope that this hint may spare much of what is left, and be otherwise useful.

Your's Respectfully, G. W.

To John S. Skinner, Esq.

TO CURE HORSES OF THE BOTTS.

Lexington, *Ky.* 14*th Nov.* 1822.

Sir,

If a recipe for curing horses of the *Botts*, will be any acquisition to the readers of your very useful paper, you may insert the following, which I can vouch for, by most successful experiments. Indeed I do not know, nor have I heard of a case in which its application has not accomplished a speedy and perfect cure.

"Drench the horse with ½ ounce of salt petre dissolved in common water, and in about 15 minutes drench him with ½ ounce of alum, dissolved in like manner. It is recommended that the horse have no water for 24 hours after this process."

The effect produced by the prescription, is this: The salt petre forces the Bott fly to *release* his firm and buried hold in the maw and stomach of the horse, and the alum destroys it.

A pint of molasses, mixed with a like quantity of sweet milk, will be a good substitute for the salt petre, if the latter cannot be had. The molasses and milk entice the fly to quit its place, that it may partake of the grateful repast. The salt petre forces a release, by the pain which it inflicts. But in either case, the alum destroys, yet this would be inoperative, so long as the fly were entrenched in the strong fortress which he makes in the maw and stomach.

Very Respectfully,
R. H.

To J. S. Skinner, Editor Am. Farm.

HEMP—*its cultivation ought to be encouraged; remarks on wretting it, so as to rival the Russia.*

Versailles, Ken. March 18th, 1822.

Sir—In this country there is a strong sentiment in favour of increasing the tariff and encouraging domestic manufactures, but discovering the nation much divided as to the policy of the measure, we are willing to submit to the will of the majority. Yet there is one of the staples of the Western and Southern States, which could be increased to almost any extent, and for the greater production of which I feel much anxiety, to wit: Hemp. We are certainly guilty of great folly in suffering our market to be supplied with Russia Hemp, when it is in our power to furnish it of a better quality, and at least $100 in the ton lower than that of Russia. We should act as inconsistently with our interests were we to encourage the importation of foreign Cotton, Tobacco and Flour, as we do by favoring that of Hemp. For several years I turned my attention to the raising of Hemp, and succeeded very well in it; but being in the possession of a considerable tract of land well adapted to grazing, and finding that to extend the raising of Hemp, so as to make it an object, in my situation, would require an increase of a description of labourers that I was unwilling to be taxed with, I declined the culture of it as a leading crop, and turned my attention chiefly to grazing. But whilst I was engaged in raising Hemp, I discovered that by securing a crop well, and keeping it one year, and then spreading it out to wret, in the usual way, I gave to it all the qualities of the water wretted Hemp; the colour was even fairer than that of the Russia, the staple stronger, and it was entirely clear of the outer scale or bark, which prevents its absorbing the quantity of tar necessary to its preservation. I communicated this information to my acquaintances, and found that whenever Hemp had been kept by them over the year, the result was uniformly the same. The best way which I have found to preserve a crop of Hemp, is to stack it in ricks of convenient size; when these are as high as they can be handily made, project the last course or two 12 or 18 inches over the sides, so as to form eaves, then top them off with rye or wheat straw, very securely. Straw which has been trodden out, I have found the most suitable. I intend raising a small crop in this way, and I will send it round to the Navy Board, as a sample.

Should you deem these remarks worthy of a place in your American Farmer, you are at liberty to publish them. With respect, your obedient servant,

NATHL. HART.

J. S. Skinner, Esq.

THE FARMER.

BALTIMORE, FRIDAY, DECEMBER 13, 1822.

During the last year, and since his return to England—Cobbett published a small work entitled the AMERICAN GARDENER, which we find to be extremely plain, practical, and useful—insomuch that we have determined to have the necessary engravings made, and to copy the whole work. The reader will find the commencement of it in this number, and will there find that the lucid manner of treating his subject, in which the author excels, is preserved in the present case.

The whole treatise is divided into six Chapters, under the following heads—I. On the situation—soil—fencing, and laying out of gardens. II. On the making and managing of Hot Beds, and Green Houses. III. On propagation and cultivation in general. IV. Vegetables and Herbs. V. FRUITS—Propagation, planting, cultivation. VI. FLOWERS.—Of flowers, and of ornamental gardening in general.

Although this little volume will occupy a considerable space in several subsequent numbers—we venture to risk our judgment, on the assurance that our subscribers will consider themselves amply remunerated.

We have had an eye to this particular season of the year, as being well suited to the introduction of the subject.

◆

PRICES CURRENT.—corrected weekly.

Flour, best white wheat, $7 25—Howard st. Superfine, $6 87½—Wharf, do. 6 12½—Wheat, white, $1 35 to 1 40—Red do., $1 27 to 1 30—Rye, 70 to 72 cents—Corn, 58 to 60 cts.—Oats, 35 to 37½ cents—Beef, live cattle, $5 to 6 per cwt.—Beef, 8 to 10 cents per lb.—Bacon, round, 10 to 11 cts.—Pork $4 50 to 4 75 per cwt.—6 to 8 cts. per lb.—Mutton, 5 to 6 cts. per lb.—Beans, $1 25 to 1 37½—Peas, black eyed, 55 to 60 cts.—Clover seed, 9 to $10—Timothy seed, 4½ to $5—Flax seed, 75 to 80 cts.—Whiskey, from the wagons, 30 to 33 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, none in market—Herrings, No. 1, $3 62½ per bbl.—No. 2, $3 37½—Fine salt 80 to 90 cts. per bush.—Coarse, do. 62½—Butter, 25 to 31¼ per lb—Eggs, 25 cts. per doz.—Turkeys, 62½ cts. to $1—Geese, 37½ to 62½ cts.—Chickens, $1 50 per doz.—Straw, $11 to 12 per ton—Hay, $17.

Maryland Tobacco—of the fine qualities, none in the market—Good Patuxent, $6 to 8, scarce—Inferior, $2 to 5, plenty and dull—seconds, $1 25 to 5—Very little doing in the market.

PATRICK NEVILLE,

Now in the service of the Editor of this paper, wishes to make an engagement for the next year. His present employer will answer any enquiries as to his character and qualifications.

THE SUBSCRIBER

Having declined Agricultural Implement making, offers for sale his balance of stock, on the most moderate terms, consisting of Wire Sieves, for Coffee, Cockle, Corn, Wheat, Oats, Flax Seed, Clover Seed, and Meal; also Wove Wire for Window Screens, and Wire Safes.—He has also for sale a YOUNG TEESWATER BULL, BY BERGAMI, formerly the property of John S. Skinner, Esq.—A line addressed to the Subscriber will be attended to.

J. GRAFFLIN.

P. S. In answer to some gentleman, respecting a machine for grinding Corn and Cob—I shall answer them as soon as an experiment now making proves satisfactory.

VERY CHEAP ELKRIDGE LAND FOR SALE.

Four hundred and twenty-five acres, situate one fourth of a mile South from the Washington turnpike, eleven miles from Baltimore, and one from Waterloo Tavern. A laboured description is unnecessary. We will just observe that the tenant says he made with four hands, this bad season, two hundred bushels corn, say five barrels to the acre, together with a fair proportion of Hay, Oats, &c. &c. There is a very tolerable Dwelling, five rooms on the first floor, a large Tobacco House, new; and other out houses. The fruit, peaches particularly, excellent mostly from Mr. Cromwells' orchard, and selected elsewhere. Some fine grafted cherries and apples, &c. &c. Garden well stocked with every kind of choice fruit. The land kindly to plaster. The country excelled no where for health. To an Eastern Shore-man, it would be a truly delightful exchange; *in short, it is absolutely the cheapest land that is, or will be in the market.*—Apply to John W. Berry, Baltimore—Mr. Sullivan, adjoining the premises—to Mr. J. G. Proud, or at Merrel's Tavern.

December, 1822.

AUBURN FOR SALE.

The subscriber will sell the above valuable FARM, situated about twelve miles north of Frederick, in this state. It contains five hundred and seventy acres, two hundred of which are mountain land, heavily wooded, the rest is well adapted to grain and grass; the latter in particular. Cotocton Furnace adjoins the Farm, and affords a good market for produce of every description.

The buildings are a large and elegant stone DWELLING HOUSE, rough cast, pure white, two stories high, with a wing attached, and extending with said wing 100 feet in front. A Grist Mill, with two run of stones, a Saw Mill, and a complete Stone Distillery, in which twenty thousand gallons of whiskey can be made annually with ease. Commodious and extensive hog pens, a large beef stable, and a comfortable Log House for the distiller's residence, have been lately erected. A Store House, Corn House, Smith's Shop, a large Barn, and in short, every building that can be of service to the farmer or distiller, will be found on this estate. With respect to fences, water courses, &c. it is deemed unnecessary to give any account, as persons disposed to purchase, will doubtless view the property, and judge for themselves: The owner wishing to remove to Baltimore, will dispose of this property at a price much below its value. If it is not sold before the first of January it will then be offered for rent, either altogether, or the Farm, Mills and Distillery separately.

For further particulars, apply to Messrs. Geo Grundy and Sons, No. 3, North Charles street or to the subscriber, living on the premises.

BAKER JOHNSON.

FOR SALE

At the Nursery of the Subscriber, on Rock Creek, near Georgetown and Washington, D. C. 500,000 Quicks of the Virginia, or Mains American HEDGING THORN, almost universally adopted for live fences, in every part of the United States; they can be packed in boxes or mats, so as to be sent with perfect safety, at a small expense, to any part of the country. Price $5 per thousand. Persons taking a large quantity, can be supplied at $4.

ALSO,

Apple, Pear, Peach, Nectarine, Apricot, Plumb, and Cherry-trees, with a great variety of Garden and Green-House Fruit, Ornamental Trees, Flowering shrubs, and Grapes, foreign and domestic. Catalogues, with prices affixed, can be had by application to the subscriber.

All orders from a distance, inclosing cash, or referring to some one near who will become responsible for the payment, will meet with prompt attention.

JOSHUA PEIRCE.

PUBLISHED BY JOHN S. SKINNER.

HORTICULTURE.

THE AMERICAN GARDENER:

Or a Treatise on the Situation, Soil, Fencing and Laying-Out of Gardens; on the making and Managing of Hot Beds and Green-Houses; and on the Propagation and Cultivation of the several sorts of Vegetables, Herbs, Fruits and Flowers.—By William Cobbett.

(Continued from page 299.)

FENCING.

30. Here, as in the case of *Situation*, I am supposing the garden about to be *made*. Those who already have gardens, have fences. They may improve them, indeed, upon my plan; but, I am supposing the case of a *new garden*; and, I am also supposing a garden to be made in what I deem *perfection*. Those who cannot, from whatever circumstance, attain to this perfection, may, nevertheless, profit from these instructions as far as circumstances will allow.

31. The *fence* of a garden is an important matter; for, we have to view it not only as giving *protection* against intruders, two-legged as well as four-legged, but as affording *shelter* in cold weather and *shade* in hot, in both which respects a fence may be made of great utility in an American Garden, where cold and heat are experienced in an extreme degree.

32. In England the kitchen-gardens of gentlemen are enclosed with *walls* from ten to sixteen feet high; but this, though it is useful, and indeed necessary, in the way of protection against two-legged intruders, is intended chiefly to afford the means of raising the fruit of *Peaches*, *Nectarines*, *Apricots*, and *Vines*, which cannot, in England, be brought to perfection without walls to train them against; for, though the trees will all grow very well, and though a small sort of Apricots will sometimes ripen their fruit away from a wall, these fruits cannot, to any extent, be obtained, in England, nor the Peaches and Nectarines, even in France, north of the middle of that country, without the aid of walls. Hence, in England, Peaches, Nectarines, Apricots, and Grapes are called *Wall-Fruit*. Cherries, Plums, and Pears, are also very frequently placed against walls; and they are always the finer for it; but, a wall is indispensably necessary to the four former.

33. In America a fence is not wanted for this purpose; but it is very necessary for *protection*; for *shelter*; and for *shade*. As to the first, gardeners may scold as long as they please, and law-makers may enact as long as they please, mankind never will look upon taking fruit in an orchard or a garden as *felony* nor even as *trespass*. Besides, there are, in all countries, such things as *boys*; and every man remembers, if he be not very forgetful, that he himself was once a boy. So that, if you have a mind to have for your own use what you grow in your garden, the only effectual security is an insurmountable fence. This prevents the existence of *temptation*, in all cases dangerous, and particularly in that of forbidden fruit; therefore the matter reduces itself to this very simple alternative: share the produce of your garden good-humouredly with the boys of the whole neighbourhood; or, keep it for your own use by a fence which they cannot get through, under, or over. Such a fence, however, it is no trifling matter to make. It must be pretty high; and must present some formidable obstacles besides its height.

34. With regard to the second point; the *shelter*; this is of great consequence; for, it is very well known that, on the south side of a good high fence, you can have peas, lettuce, radishes, and many other things, full ten days earlier in the spring, than you can have them in the unsheltered ground. Indeed, this is a capital consideration; for you have, by this means, ten days more of spring than you could have without it.

35. The *shade*, during the summer, is also valuable. Peas will thrive in the shade long after they will no longer produce in the sun. Currant trees and Goosberry trees will not do well in this climate unless they be in the shade. Raspberries also are best in the shade; and, during the heat of summer, lettuce, radishes, and many other things thrive best in the shade.

36. It will be seen presently, when I come to speak of the *form* of a garden, that I have fixed on an *Oblong Square*, twice as long as it is wide. This gives me a long fence on the North side and also on the South side. The former gives me a fine, warm extensive border in the spring, and the latter a border equally extensive and as cool as I can get it, in the heat of summer. Of the various benefits of this shelter and this shade I shall, of course, speak fully, when I come to treat of the cultivation of the several plants. At present I shall confine myself to the *sort* of fence that I would recommend.

37. I am aware of the difficulty of overcoming *long habit*, and of introducing any thing that is *new*. Yet, amongst a sensible people, such as those, for whose use this work is intended, one need not be afraid of ultimate success; and I, above all men, ought not to entertain such fear, after what I have seen with regard to the *Ruta Baga*. The people of this country listen patiently; and, if they be not in haste to decide, they generally decide wisely at last. Besides, it is obvious to every one, that the lands, in the populous parts of the country, must be provided with a different sort of fence from that which is now in use; or, that they must be, in a few years, suffered to lay waste.

38. Yet, with all these circumstances in my favour, I proceed with faultering accent to propose, even for a garden, a *live fence*, especially when I have to notice, that I know not how to get the plants, unless I, in the outset, bring them, or their seeds, *from England!* However, I must suppose this difficulty surmounted; then proceed to describe this fence that I would have, if I could.

39. In England it is called a *Quick-Set Hedge*. The truth is, however, that it ought rather to be called an *Everlasting Hedge*; for, it is not, as will be seen by-and-by, so *very quickly set*; or, at least, so very quickly raised. If I could carry my readers into Surrey, in England, and *show* them quick-set hedges, I might stop here, and only provide the seeds or plants. But not being able to do that, I must, as well as I can, describe the thing on paper. The plants are those of the *White Thorn*. This thorn will, if it be left to grow singly, attain the bulk and height of an apple-tree. It bears white flowers in great abundance, of a very fragrant smell, which are succeeded by a little berry, which, when it is ripe in the fall, is of a *red colour*. Within the red pulp is a small stone; and this stone, being put in the ground, produces a plant, or tree, in the same manner that a cherry-stone does. The red berries are called *haws*; whence this thorn is sometimes called the *haw-thorn*; as in Goldsmith's Deserted Village. "The haw-thorn "bush, with seats beneath the shade." The leaf is precisely like the Goosberry leaf, only a little smaller; the branches are every where armed with *sharp thorns*; and the wood is very flexible and very tough.

40. The haws are sown in drills, like peas, and they are taken from that situation and planted very thick in rows, in a nursery, where they stand a year, or two, if not wanted the first year. Then they are ready to be planted to become a hedge. In England there are two ways of planting a hedge, as to position of ground. One on a *bank*, with a ditch on the side: the other on the *level ground*. The latter is that, of which I have now to speak.

41. The ground for the Garden being prepared, in the manner before described under the head of *Soil*, you take up your quick-set plants, prune their roots to within four inches of the part that was at the top of the ground; or, in other words, leave the root but four inches long, taking care to *cut away all the fibres*, for they always die; and they do harm if they be left. Make the ground very fine and nice all round the edges of the piece intended for the garden. Work it well with a spade and make it very fine, which will demand but very little labour. Then place *a line along very truly*: for, mind, you are planting for generations to come! Take the spade, put the edge of it against the line; drive it down eight or ten inches deep; pull the eye of the spade towards you, and thus you make, all along a little open cut to receive the roots of the plants, which you will then put into the cut, *very upright*, and then put the earth against them with your hand, taking care not to plant them *deeper* in the ground than they stood before you took them up from the nursery. The distance between each plant is *twelve inches*. When this line is done, plant another line all the way along by the side of it, and at *six inches from it*, in exactly the same manner; but, mind, in this second line, the plants are not to stand *opposite* the plants in the first line, but opposite the *middles of the intervals*. When both lines are planted, *tread* gently between them and also on the outsides of them, and then *hoe* the ground a little, and leave it nice and neat.

42. This work should be done in the *first or second week of October*, even though the leaves should yet be on the plants. For their roots will strike in this fine month, and the plants will be ready to start off in the spring in a vigorous manner. If you cannot do it in the fall, do it the moment the ground is fit in the spring; because, if you delay it too long, the heat and drought comes, and the plants cannot thrive so well.

43. In both cases the plants must be *cut down almost close to the ground*. If you plant in the fall, cut them down as soon as the frost is out of the ground in the spring, and *before the buds begin to swell*; and, if you plant in the spring, cut down as soon as you have planted. This operation is of *indispensable necessity*; for, without it you will have no hedge. This cutting down to within half an inch of the ground will cause the plants to send out shoots that will, in good ground, mount up to the length of three or four feet, during the summer. But, you must keep the ground between them and all about them *very clean* and *frequently hoed*; for the quick-sets love good culture as well as other plants.

44. Some people cut down again the *next spring*; but, this is not the best way. Let the plants stand two summers and three winters, and cut them all *close* down to the ground as you can in the spring, and the shoots will come out so thick and so strong, that you need never cut down any more.

45. But, you must, this year, begin to *clip*. At Midsummer, or rather, about the middle of July, you must clip off the top a little and the sides near the top, leaving the bottom not much clipped; so that the side of the hedge may *slope* like the side of a *pyramid*. The hedge will shoot again immediately, and will have shoots six inches

long, perhaps, by October. Then, before winter, you must clip it again, leaving some part of the new shoots, that is to say, not cutting down to your last cut, but keeping the side always in a pyramidical slope, so that the hedge may always be wide at bottom and sharp at the top. And thus the hedge will go on getting higher and higher, and wider and wider, till you have it at the height and thickness that you wish; and when it arrives at that point, there you may keep it. *Ten feet high, and five feet through at bottom*, is what I should choose; because then I have *fence*, *shelter*, and *shade*; but, in the way of *fence*, five feet high will keep the boldest boy off from trees loaded with fine ripe peaches, or from a patch of ripe water-melons; and, if it will do *that*, nothing further need be said upon the subject! The *height* is not great; but, unless the assailant have wings, he must be content with feasting his eyes; for, if he attempt to *climb* the hedge, his hands and arms and legs are full of thorns in a moment; and he retreats as the fox did from the grapes, only with pain of body in addition to that of a disappointed longing. I really feel some remorse in thus plotting against the poor fellows; but, the worst of it is, they will not be content with fair play; they will have the *earliest* in the season, and the *best* as long as the season lasts; and, therefore, I must, however reluctantly, shut them out altogether.

46. A hedge five clear feet high may be got in *six years* from the day of planting. And, now let us see what it has cost to get this fence round my proposed garden, which, as will be seen under the next head, is to be 300 feet long and 150 feet wide, and which is, of course to have 900 feet length of hedge. The plants are to be a foot apart in the line, and there are to be two lines; consequently, there will be required 1800 plants, or suppose it to be *two thousand*. I think it will be strange indeed, if those plants cannot be raised and sold, at two years old, for *two dollars a thousand*. I mean *fine, stout* plants; for, if your plants be poor, little slender things that have never been transplanted, but just pulled up out of the spot where they were sown, your hedge will be a year longer before it come to a fence, and will never, without extraordinary care, be so good a hedge; for, the plants ought all to be as nearly as possible of *equal size;* else some get the start of others, subdue them, and keep them down, and this makes an uneven hedge, with weak parts in it. And, when the plants are first pulled up out of the seed-bed, they are too small to enable you clearly to ascertain this *inequality of size*. When the plants are taken out of the seed-bed and transplanted into a *nursery*, they are *assorted* by the nursery men, who are used to the business. The strong ones are transplanted into one place, and the weak ones into another so that, when they come to be used for a hedge, they are already equalized. If you can get plants *three years old* they are still better. They will make a complete hedge *sooner;* but, if they be two years old, have been transplanted, and, are at the bottom, as big as *a large goose quill*, they are every thing that is required.

47. The cost of the plants is, then, *four dollars*. The pruning of the roots and the planting is done, in England, for about *three half pence a rod;* that is to say, about *three cents*. Let us allow *twelve cents* here. I think I could earn two dollars a day at this work; but, let us allow enough. In 900 feet there are 54 rod and a few feet over; and, therefore, the planting of the hedge would cost about *seven dollars*. To keep it clean from weeds would require about two days work in a year for five or six years: *twelve dollars more*. To do the necessary clipping during the same time, would require about *thirty dollars*, if it were done in an extraordinary good manner, and with a pair of *Garden Shears*. So that the expences to get a complete hedge round the garden would be as follows:

	D.	C.
Plants - - -	4	00
Planting - - -	7	00
Cultivation - -	12	00
Clipping - - -	30	00
Total -	53	00

48. And thus are a *fence*, *shelter* and *shade*, of everlasting duration, for a garden, containing an acre of land, to be obtained for this trifling sum! Of the *beauty* of such a hedge it is impossible for any one, who has not seen it, to form an idea: contrasted with a wooden, or even a brick fence it is like the land of Canaan compared with the deserts of Arabia. The leaf is beautiful in hue as well as in shape. It is one of the very earliest in the spring. It preserves its bright green during the summer heats. The branches grow so thick and present thorns so numerous, and those so sharp, as to make the fence wholly impenetrable. The *shelter* it gives in the early part of spring, and the *shade* it gives (on the other side of the garden) in the heat of summer, are so much more effectual than those given by wood or brick or stone fences, that there is no comparison between them. The *Primrose* and the *Violet*, which are the earliest of all the flowers of the fields in England, always make their first appearance under the wings of the Haw-Thorn. Goldsmith, in describing female innocence and simplicity, says: "Sweet as primrose peeps beneath the Thorn." This Haw-Thorn is the favourite plant of England: it is seen as a flowering shrub in all gentlemen's pleasure-grounds; it is the constant ornament of paddocks and parks; the first appearance of its blossoms is hailed by old and young as the sign of pleasant weather; its branches of flowers are emphatically called "May," because, according to the Old Style, its time of blooming was about the first of May, which in England is called "May day;" in short, take away the Haw-Thorn, and you take away the greatest beauty of the English fields and gardens, and not a small one from English rural poetry.

49. And why should America not possess this most beautiful and useful plant? She has English gew-gaws, English Play-Actors, English Cards and English Dice and Billiards; English fooleries and English vices enough in all conscience; and, why not English *Hedges*', instead of post-and-rail and board fences? If, instead of these steril-looking and cheerless enclosures the gardens and meadows and fields, in the neighbourhood of New-York and other cities and towns, were divided by quick-set hedges, what a difference would the alteration make in the look, and in the real *value* too, of those gardens, meadows and fields!

50. It may be said, perhaps, that, after you have got your hedge to the desired height, it must still be *kept clipped* twice in the summer; and that, therefore, if the fence is *everlasting*, the trouble of it is also everlasting. But, in the first place, you can have nothing *good* from the earth without annual care. In the next place, a wooden fence will soon want nailing and patching annually, during the years of its comparatively short duration. And, lastly, what is the annual expense of clipping, when you have got your hedge to its proper height and width, and when the work may be done with a *long-handled hook* instead of a pair of *shears*, which is necessary at first? In England such work is done for a *penny a rod*, *twice* in the summer. Allow three times as much in America, and then the annual expense of the garden hedge will be less than *four dollars a year*.

51. Thus then, at the end of the *first twenty years*, the hedge would have cost *a hundred and nine dollars*. And, for ever after, it would cost only *eighty dollars in twenty years*. Now, can a *neat, boarded fence*, if only eight feet high, and to *last twenty years*, be put up for less than *six dollars a rod?* I am convinced that it cannot; and, then, here is an expense for every twenty years, of *three hundred and forty eight dollars*. A *Locust* fence, I allow, will last *for ever;* but, then, what will a fence *all of Locust, cost?* Besides the difference in the *look* of the thing; besides the vast, difference in the nature and effect of the *shelter* and the *shade;* and besides, that, after all, you have, in the wooden fence, no effectual protection against *invaders*.

52. However, there is one thing, which must not be omitted; and that is, that the hedge will not be a *fence*, or, at least, I would not look upon it as such, until it had been planted *six years*. During these six years, there must be a fence all round on the outside of it, to keep off pigs, sheep and cattle; for as to the two-legged assailants nothing will keep them off except a quick-set hedge. If I had to make this *temporary fence*, it should be a *dead hedge*, made of split hickory rods, like those that hoops are made of, and with stakes of the stoutest parts of the same rods, or of oak saplins, or some such things. The *workmanship* of this, if I had a Hampshire or Sussex hedger, would not cost me more than six cents a rod; perhaps, the stuff would not cost more than a quarter of a dollar a rod; and this fence would last, with a little mending, as long as I should want it. But, as few good hedgers come from England, and as those who do come appear to think, that they have done enough of hedging in their own country, or, if they be set to hedging here, seem to look upon themselves as a sort of *conjurors* and to expect to be paid and treated accordingly, the best way, probably, is, to put up a temporary post-and-rail fence, sufficient to keep out a sucking pig; and to keep this fence standing until the hedge has arrived at the age of six years, as before mentioned.

53. There yet remains one advantage, and that not a small one, that a quickset hedge possesses over every other sort of fence; and that is, that it effectually keeps out *poultry*, the depredations of which, in a nice garden, are so intolerable, that it frequently becomes a question, whether the garden shall be abandoned, or the poultry destroyed. Fowls seldom, or never, fly *over* a fence. They, from motives of prudence, first alight *upon it*, and then drop down on the other side; or, if they perceive danger, turn short about, and drop back again, making a noise expressive of their disappointment. Now, Fowls will alight on wooden, brick, or stone fences; but *never on a quickset hedge*, which affords no steady lodgment for their feet, and which wounds their legs and thighs and bodies with its thorns.

54. What has been said here of forming a hedge applies to meadows and fields as well as to gardens; observing, however, that, in all cases, the ground ought to be well prepared, and cattle, sheep and pigs kept effectually off, until the hedge arrive at its sixth year.

55. If I am asked how the white-thorn plants are to be had *in America*, I answer, that I saw a Tree of Hawthorn at *McAlister's Tavern*, near Harrisburg, in Pennsylvania, *loaded with red berries*. In short, one large tree, or bush, would soon stock the whole country; and they

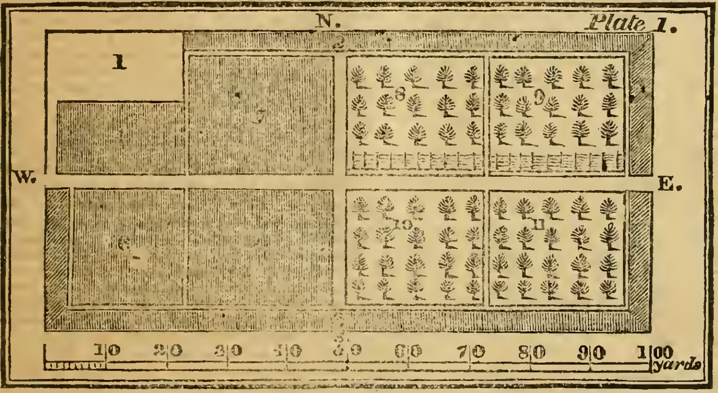
may be brought from England, either, in plant or in berry. But, there are many here already. If more are wanted, they can be had any month of December, being shipped from England, in barrels, *half sand and half berries*, in November. The berries, which are called *haws*, are ripe in November. They are beaten down from the tree, and cleared from leaves and bits of wood. Then they are mixed with sand, or earth, four bushels of sand, or of earth, to a bushel of haws. They are thus put into a cellar, or other *cool* place: and here they remain, always about as moist as common earth, until *sixteen months* after they are put in; that is to say, through a *winter*, a *summer*, and *another winter;* and then they are sown (in America) as soon as the frost is clean out of the ground. They ought to be sown in little *drills;* the drills a foot a part, and the haws about as thick as peas in the drills. Here they come up; and, when they have stood till the next year, you proceed with them in the manner pointed out in paragraph, 40.

56. These haws may be had from *Liverpool*, from *London*, or from almost any Port in Great Britain or Ireland. But, they can be had only in the months of November and December. Seldom in the latter; for, the birds eat them at a very early period. They are ripe early in November; and, *half haws half sand*, may be had, I dare say, for *two dollars a barrel* at any place. *Three barrels* would *fence a farm!* And, as America owes to Europe her *Wheat*, why be ashamed to add *fences* to the debt? But (and with this I conclude,) if there be a resolution formed to throw all lands to common, rather than take the trifling trouble to make live fences, I do hope that my good neighbours will not ascribe these remarks to any disposition in me to call in question the wisdom of that resolution. *Figure* 1, in *Plate* IV. exhibits a piece of the Garden-Hedge in elevation, in the winter season. See this Plate IV. in Chapter V.

LAYING-OUT.

57. The *Laying-out* of a Garden consists in the division of it into several parts, and in the allotting of those several parts to the several purposes for which a garden is made. These parts consist of *Walks*, *Paths*, *Plats*, *Borders*, and a *Hot-Bed Ground.*

58. To render my directions more clear as well as more brief, I have given a *plan* of my proposed garden, PLATE I.



This is not, strictly speaking, a plan; because it exhibits *trees* in elevation; but it will answer the purpose. Of the *sorts* of which these trees are, and of other circumstances belonging to them, I shall speak fully under the head of *Fruits*. The precise description of the *Hot-Beds* will be found under that head. At present my object is to explain the mode of Laying-out the Ground.

59. The length of the Garden is 100 yards, the breadth 50 yards, and the area contains a statute acre; that is, 160 Rods of 16½ feet to the Rod. In order to bring my length and breadth within round *numbers*, I have been obliged to add 6 rod and 58 square feet; but, with this trifling addition here is a spot containing an acre of land. Before, however, I proceed further, let me give my reasons for choosing an *Oblong Square*, instead of a *Square of equal sides*. It will be seen, that the *length* of my garden is from East to West. By leaving a greater length in this direction than from North to South, three important advantages are secured. *First*, we get a *long* and *warm* border under the *North fence* for the rearing of things early in the spring. *Second*, we get a *long* and *cool* border under the *South* fence for *shading*, during the great heats, things, to which a burning sun is injurious. *Fourth*, by this shape of the area of the Garden a larger portion of the whole is sheltered, during winter and spring, from the bleak winds.

60. Having such a spot before us, little difficulty can arise in *Laying it out.* Indeed, it is only necessary to state the *dimensions*. The several parts are distinguished by *numbers*. The long walk, running from East to West is 6 feet wide, as is also the cross walk, in the middle. All the paths are 3 feet wide. The borders, Nos. 2 and 3, are 9 feet wide. The dimensions of the Plats Nos. 5, 7, 8, 9, 10, and 11, are (each) 70 feet from East to West and 56 from North to South. Plat, No. 6, is 56 feet by 50. Plat, No. 4, is 60 feet by 36. The Hot-bed Ground, No. 1, is 70 feet by 36. I leave trifling fractions unnoticed. In the English gardening books, they call those parts of the garden "*Quarters*," which I call *Plats;* but, for what *reason* they so call them it would be difficult to conjecture. I call them *plats*, which is the proper word, and a word, too, universally understood. A *plat* is a piece of ground; and it implies, that the piece is *small*, compared with other larger portions, such as *fields*, *lots*, and the like. I will just anticipate here, that when *beds* for Asparagus, onions, and other things are made, they should run *across* the plats from North to South; and that rows of Corn, Peas, and Beans and other *larger things* in rows should have the same direction. But, when *beds* are sown with smaller things, the rows of those things must go *across the beds;* as will be seen when we come to speak of sowing.

61. As to the *art* of Laying-out, it would be to insult the understanding of an American Farmer to suppose him to stand in need of any instructions. A *chain*, or a *line*, and *pole*, are all he can want for the purpose, and those he has always at hand. To form the walks and paths, is, in fact, to lay out the Garden; but, the walks and paths must be made not only *visible*, but must be *dug out.* The way is to take out the earth about four inches deep, and spread it over the adjoining ground, some on each side of the walk or path, taking care to fling, or carry, the earth, so dug out, to such a distance, that every part of the ground, which is not walk or path, receive an equal proportion of what is thus dug out. *Gravel* may be put in the walks and paths: it makes the whole look *neater;* but, in a country where the frost is so hard in winter and the ground so dry in summer, gravel can hardly be said to be *necessary*, while it may be troublesome; for, in spite of all you can do, a part of it will get into the borders; and, there it must do harm.

62. It will be seen, that about a *third* part of the Garden is appropriated to *Fruit trees.* The reason for this, and the uses of the other parts of the ground, will be fully stated in the Chapters on *Cultivation.* I have here treated merely of the form and the dimensions, and of the division, of the Garden. It is in treating of the cultivation of the several sorts of plants that our attention will be brought back to a close contemplation of the several parts included in this division.

CULTIVATION OF COTTON.

The following extract from a circular, from the house of Cropper, Benson and Co. under the date of the 27th September, contains some views and estimates in relation to the culture and sale of cotton, which may be very interesting to the planter and merchant.—*Savannah paper.*

Annexed, we give two estimates, drawn up by two different planters, neither knowing any thing of each other's statement, nor we of their's, and though there is some trifling difference in the mode of estimate, yet it will be seen that they exhibit almost exactly the same result.

This is the present mode of management, with which the planters must be content, if they can do no better. But sugar on the banks of the Mississippi, is paying a much greater profit, and though the land fit for its growth is more limited than that fit for cotton, yet it is estimated that there is enough within the proper latitude, to produce more, by at least 150,000 hogsheads, than is yet grown there. The estimates which we have from thence, make the cost of 1lb. of cotton very nearly the same as that of 4lb. of sugar; and yet, if our present prices of cotton remain, it will yield only 7 cents, whilst sugar, by the last advices from New Orleans, is quoted 9 to 11 cents, or 8 cents on the plantation. Estimating the profit of the one culture with the other, upon this scale of prices, whilst the one only pays 2½ per cent. the other would pay about 23 per cent. per annum. Estimates are not always to be depended upon, but we have some thing more than estimate in this case. We know that in Barbadoes the culture of cotton is nearly given up, and in Demerara, though sugar has very much increased, yet there has been a decrease in cotton. Now, whilst these changes are taking place, it is a fact which any one, knowing the prices of the two articles, can ascertain for himself, that cotton has sold on the average at three or four times, at least, the prices of sugar; and yet sugar, under these circumstances, has been preferred. Will not the change be very rapid where sugar is even higher than cotton?

Next as to manufacturing: the planters are giving in some cases, 40 cents per yard for cotton bagging. This they might make themselves from cotton, as is done in the Brazils, with great advantage. They might also make their own clothing, especially that of the negroes. If they changed their system in this respect, and grew and made every thing they wanted, they might certainly sell their surplus cotton at any price; but it must be borne in mind, that they would have much less to sell. They have the spinning jenny, in some parts of North Carolina, amongst the farmers; weaving is carried on in almost every part of the world; and a little consideration will show what great advantages they would have in manufacturing.

The bale of cotton which the planter can only sell for *4l. 10s.* cannot be delivered to the British manufacturer for less than *9l.* and when to this the expense of manufacturing is added, the whole cannot be conveyed back to the planter without an addition of fully fifty per cent. in duty and profit. Then we may fairly say, that, in exporting cotton and importing manufactured goods, the planter pays 100 per cent. on the wages paid in England, and he would gain an advantage to this extent if he manufactured them at home. Perhaps it will be said that wages are higher; let us examine this. The average produce of a slave's labour is 1½ bags of cotton, or *6l. 15s.* being about *5d* per working day. Now we think we do not over rate the earnings of a whole family in our cotton manufacturing districts, if we take them at *5s.* per week, reckoning the whole population, whether able to work or not. Five shillings per week is *10d.* per day; yet the planter now gives 100 per cent. which makes *20d.*

That low prices will make the planters turn to something else, is not mere conjecture; we can refer to the years of the embargo and the war.—Before the commencement of that period, viz. in 1807, the export of cotton, from America to this country, was 171,000 bags; there was no year from that to 1816, when the imports were the whole of one crop, and then our imports were 166,000, and in 1817, 197,000. The crop of 1807 was a great one, and, therefore, it would not be fair to take that singly; putting the crop of 1806 to it, which was 124,000, it will make an average of 148,000 bags; whilst 1816 and 1817, put together will make 182,000 bags, an increase of only 20 per cent. whilst the population had increased about 30 per cent. This, too, comprises three years, when the inducement to plant extensively would be great; so that there is a strong probability that, for a part of the time of the embargo and war, the cultivation of cotton must rather have receded than gone forward; and yet at that time they knew little of the growth of sugar. They could, during these periods, sell cotton, if they chose, and they would naturally look forward to a better market for their produce at the termination of their disputes with this country.

A part of the extension of the cultivation of cotton, arises from the purchase of slaves, which they would have the power, as well as the inducement, to do, while cotton sold above 15 cents; but when it has fallen to half that price, they will have neither. This will at once take off 7 of the 10 per cent. increase, for their natural increase is only about 3 per cent. We may also suppose a transfer to sugar of, perhaps, one-eighth, or 12½ per cent.; for the Americans move about rapidly to what pays them best; and, surely, for both time and cotton consumed in manufacturing cotton bagging, and their own clothes, we may put 10 per cent. more: these together will make 29½ per cent. We will call it 30 per cent. which would reduce the crop, to arrive in 1824, from 645,000 bags to 452,000 bags, reducing the stock at the end of that year 193,000; but that would be impossible, for it was only estimated in the other case at 149,000 bags.

It is quite evident then, if it were possible that our present prices should continue, we should have such a decrease in the growth, and such an increase in the consumption, as would, at a very early period, leave us without a bag of cotton on hand.

The apathy which has allowed the prices of cotton to fall to their present rates, pervades other branches of commerce; for though it is reasonably estimated, that, at the present rate of consumption, all the sugar in the country will be exhausted before the new will arrive, yet the holders are selling at the lowest price ever known, and look on these facts, with which they are perfectly acquainted, as though it could never rise again. Last year's crop of corn is generally estimated not to have supplied the country more than 11 months; and though the present crop was less than the preceding, and the consumption going on at a greater rate than ever known, still the price is lower than ever remembered. If the present un-mercantile feeling of holding no stocks is to continue to prevail, we may be quite run out of all these important articles before any one is aware.

CROPPER, BENSON & CO.

ESTIMATES.

South Carolina contains 502,741 inhabitants, of which 258,475 are slaves. Georgia contains 340,989 inhabitants, of which 148,482 are slaves. Alabama contains 127,901 inhabitants, of which 41,000 are slaves. Mississippi contains 75,448 inhabitants, of which 32,814 are slaves. Louisiana contains 153,407 inhabitants, of which 68,500 are slaves. Tennessee contains 422,613 inhabitants, of which 80,000 are slaves. Total, 1,623,099 inhabitants, of which 629,271 are slaves.

Total population as above	1,623,099
Deduct slaves	629,271
Leaving a population of free persons of	993,828
Deduct for free coloured persons	20,828
Leaving a population of white persons of	973,000
It is commonly estimated that one slave to every ten white persons, is employed for domestic purposes, which will give	97,300
Estimated number of slaves on sugar and tobacco plantations	40,000
Do. on rice do.	40,000
Do. mechanics	20,000
Total	197,300
Total slave population	629,271
Effective and non-effective hands employed otherwise than on cotton plantations as above	197,300
Leaving effective & non-effective slaves on the cotton plantations	431,971

First estimate of cost on cotton plantations.

Food, 13 bushels of corn, or 1 peck per week, at 70 cents per bushel	$9 10
1 hat, $1 50; 2 pair shoes, $2 50; 1 blanket, $3	7 00
6 yards plains, at 75 cts. 4 50; doctor and physic, $1	5 50
One suit of osnaburgs	1 50
Tools, vehicles, and horses	1 00
Tax	1 50
	$25 60

100 negroes are equal to 60 good working hands:

100 average negroes worth now perhaps $350 each	$35,000
100 average negroes or 60 working hands will cultivate each 3½ acres, or 210 acres, worth per acre 50 dollars	10,500
Planter's capital	$45,500

If one working hand cultivates 3½ acres, which give 900lbs of clean cotton, 60 working hands, or 100 average hands, will cultivate 210 acres, which yield 54,000 lbs. clean cotton, which, at 11 cts. per lb. is gross		$5,940
Deduct the expense of keeping 100 hands at $24, in lieu of 25 60, the estimate	2,400	
Factorage, 2½ per cent. on $5,940	148	
Carriage, rent, drayage, and labor on 185 bags or 54,000lb weight, at $2 50	712	
Bagging, at 90 cents per bale	256	
		5,316
Leaves net profit of 100 negroes, or 60 working hands, at 11 cents		2,324

Then it appears, that a capital of 45,500 dollars in land and negroes, yields, if the cotton sell at 11 cents per lb. 2,324 dollars, or 5 1-10 per cent.

Second estimate of cost of cotton plantations.

Cost of keeping one negro a year on a cotton plantation:

Food, 13 bushels of corn, or 1 peck per week, at 70 per bushel	$9 10
Touching this item, this planter says that he appoints a certain portion of his negroes to cultivate bread stuff for those employed in his plantations, and that whether he cultivate it or buy it, it will cost as above.	
1 pair of shoes $1 28; 1 blanket in 3 years at 3 dollars, is 1 dollar	2 25
6 yards of plains, at 75 cents, 4 50; doctor and physic, 1 dollar	5 50
1 suit osnaburgs for summer	1 50
Tools, vehicles, and horses	1 50
Tax	1 00
	20 85

This planter says, that, on an average, 20 dollars will defray the expense per head, and these items come near it. The negro, out of his own earnings, buys a hat and any more shoes he may require.

But, out of 100 average hands, 50 only are workers, the other fifty being rendered non-effective by infancy, infirmity, or from being used for domestic purposes.

100 average negroes, worth 400 dollars each	40,000
100 average negroes, or 50 working hands, will cultivate each 3½ acres or 175 acres, worth per acre $80	14,000
Amount of capital in negroes and land	$54,000

The land is only worth $20 an acre; but a planter must have at least four times the quantity that is actually employed for cotton, seeing that it soon gets exhausted. It is too expensive to restore it by manure and it lies in fallow until the remainde of the estate has undergone exhaustion; so tha

$80 is really the cost of an acre of the land actually in use.

Average gangs of negroes would, not long ago, have commanded $425 each, so that the above is a low estimate.

If one working hand cultivates 3½ acres, which will yield 900lbs of clean cotton, 50 working hands will cultivate 175 acres, which will yield 45,000 lbs. of clean cotten, and which, at 10 cents per lb. is -		4,500 00
Deduct expense of keepiog 100 hands at $20	2,000 00	
Factorage on $4,500 at 2½ per cent.	112 50	
Carriage, rent, drayage and labor on 150 bags, or 45,000lb weight $2 50 each	375 00	
Bagging, at 90 per bale	135 00	2,622 50
Nett profit of 100 average or 50 working hands, at 10 cents		$1,877 50

So that on a capital of negroes and land, amounting to $54,000 there is a profit of 3 per cent. and twenty five-fifty fourths of one per cent. at 10 cents per pound.

INTERNAL IMPOVEMENT.

A Sketch of the Great Northern or Champlain Canal.

WATERFORD, 28TH NOV. 1822.

On this day the last stone of the Northern or Champlain Canal, was laid by Governor Clinton, President of the Board of Canal Commissioners, in the presence of a great assemblage of people. The ceremony was solemn and impressive. Before the laying of the stone, the President delivered a short address, which stated in substance, that he proceeded with great pleasure, in the presence of his assembled fellow-citizens, to consummate a great work devoted to the interests of Agriculture, Manufactures, and Commerce, and connecting the gulf of St. Lawrence with the Bay of New-York. He invoked the smiles of the Almighty Father of the Universe on the work and the occasion, and supplicated the realization of all the blessings anticipated from this undertaking. The stone was then laid amidst the acclamations of the people, and a most eloquent prayer was offered to the throne of grace by the Rev. Dr. Blatchford. The company passed in two boats, drawn by five elegant horses, from the river through a tier of three locks of white marble and excellent workmanship, into the Canal. The marble was procured from Westchester county, and is firmly cemented by hydraulic mortar, made of Northern lime-stone. The locks are of eleven feet lift each, and are almost perfectly water-tight. Between the locks there are two spacious circular basins for the accommodation of boats passing out and into the river. Waterford is the head of sloop and boat navigation of the Hudson, and the Northern Canal is now finished to it; indeed it has already been navigated by boats of transportation. One has just arrived from Lake Ontario, by the St. Lawrence and Sorel rivers, and Lake Champlain; and I saw with great pleasure, packages and boxes, stowed on the banks of the Canal, destined for Whitehall and Peru, in Clinton county.

As the importance of this Canal is not sufficiently appreciated, nor its character extensively known, it may not be amiss to subjoin a few remarks, which I have derived principally from the enlightened acting commissioner.

From Whitehall, where it unites with Lake Champlain, to Waterford, where it finally enters the Hudson River, the distance is about 61½ miles. From Whitehall to Fort Edward, there are 19 miles of Canal, and about 5 miles of the waters of Wood Creek. In this space there are ten locks: three at Whitehall to let boats down into the Lake: three at Fort Edward for the same purpose, as to the Hudson River; about half way between Fort Edward and Whitehall, to wit, at Fort Ann, there are three locks, which descend to the level of Wood Creek and Halfway Brook. These streams unite below the village, and feed this lower level of the Canal. Some short distance below this junction, there is a lock recently located and made of wood. The upper level of the canal from Fort Edward to Fort Ann is supplied by the Hudson: the water is impelled into a feeder by a most stupendous dam of 30 feet altitude, erected across that river, and there is now another feeder preparing to run from above Glen's Falls, and to pass into the Canal north of Sandy Hill, which will also serve as an auxiliary Canal, to convey lumber and other commodities from an extensive range of country in that direction.

There is a striking feature in the geology of this route, which deserves a scrutinizing examination. It appears that the Hudson River at Fort Edward, which, you know, is below Glen's and Baker's Falls, is 22 feet higher than Lake Champlain. There is a descent of 50 feet from the summit level at Fort Ann, to the Lake at Whitehall, and 28 feet to the river at Fort Edward. Forty or fifty feet high, in the primitive rocks at a place called the Narrows in Wood Creek, there are great cavities or pots, produced by the action of rotary stones under the power of water falling perpendicularly: a critical inspection of these lapideous excavations might determine whether the Hudson River did not, previous to its rupture of the great barrier at the Highlands, diverge to the north in this direction. From the Canal at Fort Edward to Fort Miller Falls, 8 miles, the river is used in lieu of the Canal, and is kept up to the requisite altitude by a dam. Round those falls there is a short Canal of half a mile, which unites again with the river by two locks; the river is again used for about two and a half miles, and then by a dam it is forced into a canal, on the west side, which extends about 26½ miles to Waterford.—This part contains six locks, and at Waterford there are three more, making in the whole extent 21 locks; 46 miles of artificial navigation, and 15½ miles of improved natural navigation, to wit, five miles of Wood Creek, and 10½ of the Hudson River. From Waterford the Canal proceeds 2½ miles further south, where it unites its waters with the western or Erie Canal, after crossing the Mohawk River by a dam, and which river is thereby put into requisition as a feeder for the northern Canal, in both a northern and southern direction, and also before and after its junction with the western. This latter portion is nearly completed.

This whole extent is 64 miles. The work was commenced on the 10th of June, 1818, and has been finished in somewhat more than four years. When compared with similar works in the old world, the execution may be prooounced a rapid one, and has never been exceeded in that respect, except by its relative, the western Canal. The celebrated Canal of Languedoc is 148 miles long, it took fourteen years to finish it, and it employed always the labour of 8,000, and some times 12,000 men. The Forth and Clyde Canal is 35 miles long, It was commenced in 1768, and not completed until 1790.

The Canals of China have been the subject of unbounded panegyric. The distance from Pekin to Canton, by canals and rivers, is 920 miles, and the voyage takes a boat three months. On our canals the same extent could be passed in one month. The truth is, that the Chinese canals are very inferior to the European. Instead of locks, the boats are drawn up and let down inclined planes by human power, at vast expense and trouble. A lock appears to be a very simple invention. It is but a sluice with two double gates, and yet it never occurred to that ingenious people. The first lock was constructed by the Venetians in 1481.

The influence of these works is already felt, not only in different parts of the United States, but has extended to Europe. The transportation of merchandise from Philadelphia to Pittsburgh, has fallen from 120 dollars to 40 dollars a ton. When the western Canal is finished, goods can be transported from New York to Pittsburgh for 30 dollars a ton. They formerly cost 100 dollars from New-York to Buffalo. It will now be done for less than 15 dollars. The receipts of the Holland Land Company have this year been immense, because the western settlers have found a market; and the share holders of our *vader-land* will be astonished at the unexpected increase of their profits.

In their report of 1817, the Canal Board estimated, that the country within the reach of the northern Canal, would furnish annually two millions of boards and planks; one million feet of square timber, and immense quantities of dock logs, scantling, masts, and spars. Besides, those northern regions are the sites appropriated by nature for her mineral productions; and it is well known that they contain iron ore unsurpassed for quantity and quality; marbles of various kinds and colours; lime stone from the primitive to the secondary, and the materials of the best hydraulic cement; bark for tanning and other manufacturing processes; inexhaustible stores of pot and pearl ashes; wheat, flour, butter, cheese, flax, flax-seed, wool, beef, pork, and maple-sugar; the best of cattle for the butcher, dairyman and grazier, and the finest sheep, hogs, and poultry, besides the fruits of autumn. In going to the New-York market, the proprietors of these articles follow the current of interest, and the direction of political affinity, and their preference is enforced by the act of the British Parliament, fettering our commerce with the Canadas, and thereby imposing the necessity of a limited or partial trade with those countries.

We cannot form any definite opinion of the value or the amount of commodities, that will be conveyed down the Caoal, nor of the merchandise that will be returned, because it has not been in operation until this day. So far back as July last, it was estimated such was the immense amount of lumber in the Canal and in the Lake, waiting for the advent of the waters, that it would take twenty days for that in the Lake to pass into the Canal, and forty days for that in the lower level to pass into the upper; and the waters of the Hudson are, even at this advanced period of the season, covered with rafts, making their way to our great commercial emporium

G. W.

LETTER V. ON THE POOR LAWS.

SIR—The Poor Laws are not less subservient to the cause of the unjust, than active in the promotion of idleness and drunkenness. Without their powerful intercession, the tongue of the seducer would often plead in vain, aided as it is by the ardour of youth and the desire of nature. The vows of a lover may be forgotten, and his oaths are proverbially false; but the laws cannot commit perjury. If the greatest criminality of seduction consist in the ruin of its victim, seduction is no longer a vice, except among the higher classes of society. Our legislatures have, hitherto, refrained from declaring prostitution among the lower classes of females, praiseworthy, but they have not hesitated to attach to it the reward of merit, by making it profitable.—Lest any mistrust of her enamoured *hero's* vows, lest any sordid fear of loss of bread, from the loss of character, should check the full tide of the fair one's tenderness, or throw a chill on her dissolving heart, which pants to give a loose to all the joys of love; a grave, wise Senator appears, his countenance beaming with all the benignity of venerable worth, and signs a deed of settlement, with the wealth of the whole state, as security, for the maintenance of herself and all the tender pledges of her generous passion. Is this an unfair representation of one branch of the Poor Laws? Do they not pay a bounty, and a high one too, on the production of bastards? And while our farmers are so feelingly and so justly complaining of the taxes they pay to support domestic manufactures, I cannot see why this particular branch of them should be so much encouraged, as it has never been doubted that quite enough would be produced, even without the extraordinary inducement of a premium.—That the Poor Laws do so operate, is evident; for, if a woman swears that a particular man is the father of her child, the law compels him to enter into bond, with sufficient security, in a sum at the discretion of the magistrates, to prevent the child's becoming chargeable to the county. Suppose the seducer is rich, and a man of character, will any doubt of the security of his promises, any fear of being left destitute in a world, to whose respect she has forfeited all claim, prevent a woman from consenting to his wishes, when she knows, that rather than have his character exposed in a court of justice, he will submit to almost any imposition? But suppose that the libertine is not rich, and has little regard on this score, for his character, and that the woman knows this, and has no faith in his promises—still she has faith in the promises of the law; she knows that the law will force him to pay a sufficient sum for the support of his child; and that the Overseers of the Poor must give the money to some one to take care of the child. Who can they find to do this better, or at a less price than the mother? To her, therefore, it is given. If she has other means of support, this money is a positive and considerable income, since a mother, living at home, can maintain her child for a much smaller sum than would induce any other person to undertake the charge. In these two cases, the law's encouragement to vice is indirect, and its provisions may, upon a superficial examination, be defended with some show of plausibility; since it may be proper to make the seducer maintain his own offspring, and pay a penalty for his indulgence in criminal pleasures. I shall, however, shew, presently, reasons (in addition to those already stated) for believing that even in these cases, the law does more harm than good. But where both the parties are poor, the law's inducement to the violation of moral principle is direct and immediate in its operation: and is so far from possessing even the shadow of justice, that it makes the most moral and religious citizens in the country, actually pay, out of their own pockets, the wages of prostitution; and compels the virtuous to become the purse-bearers of all those whose vicious inclinations might be restrained, by the want of means to purchase the gratification of their licentious desires. One of the provisions of the Poor Laws directs, that whenever any child is about to become chargeable to the county, in consequence of the poverty of its parents, its care shall be committed to the Overseers of the Poor, and upon their requisition, a tax shall be levied upon the county, for its support; and for the support of the mother, also, as long as her confinement may render her unable to work. The operation of this law, I will illustrate by an instance which has actually occurred in a neighbouring county, and which, I dare say, may be paralleled in every county in the state. In this case, the lover and his beloved were both poor. The maiden had obtained a comfortable situation, in a decent family, but not having the fear of starvation before her eyes, and being instigated by the too-persuasive eloquence of some *Lothario*, among the ploughboys—

> " Fierceness and pride, the guardians of her honor,
> " Were lulled to sleep, and love alone was waking."

The consequence was, of course, a dismissal from her service, and afterwards an application to the Overseers of the Poor. She could be maintained no where, during her teeming time, so cheaply as at the Poor House, and to the Poor House she was sent to await her delivery. When her child was born, no one could nurse it so well, or at so little expense, as herself, and she was accordingly retained for that purpose. As soon as the child was old enough to do without her nursing, being a hearty young woman, she was dismissed to seek her own support. But our modern *Calista*, however *fair*, seems to have been not much of a *penitent*, for, whether from long disuse, work had become irksome to her, or whether she had contracted an affection for the company and manners of the Poor House, or was naturally one of those tender hearted damsels who are pained at refusing a favour it is in their power to grant; she very quickly provided herself with a title to re-admission into the Poor House, where she now is, ready, no doubt, to repeat the same course; thus made, by law, a special breeder of citizens, and bidding fair, although no *Cornelia*, to be the mother of many a factious *Gracchus*. This last is the class of cases, in which the legislature have pledged the whole wealth of the state, for the performance of " Lovers' Vows." And the remedy which accrues upon the breach of these covenants is among the shortest and best in our whole system of jurisprudence; for as soon as the debt is ascertained to be due, the amount is levied upon the whole body of the people, and is collected with as much speed and certainty as the taxes which support the government. It will not do to speak disrespectfully of laws or to call legislative bodies by hard names, but if an individual were to give a deed of trust, upon his whole estate, for a similar purpose, we should not hesitate to hint at his connexion with *Sir Pandarus* of *Troy*.

The laws upon this subject have been defended upon the ground that they prevent seduction by deterring men from making the attempt. These laws, then, are to operate like all other laws for the prevention of crime, by exciting fears of punishment. But they relieve the females from the fear of every thing but disgrace, while they add to this fear no other terror in the minds of men of property, except the loss of a moderate sum of money, and absolutely impose no penalty upon him who has no property. Is the fear of disgrace on account of a bastard child, likely to operate as powerfully on a man as on a woman? Do the present prejudices of society annex the same infamy to libertinism in a man, as to incontinence in a woman? Does a man forfeit all the respect and good will of his neighbours and friends, is he declared an outcast from society, and hunted from the company of his equals, because he is not a very Joseph in his life? Or can a woman still retain the esteem and affection of her associates, be admired, loved and courted by her female acquaintance, while she leads the life of a Cleopatra? But grant that the disgrace is equally great in the one as in the other—Is the inconvenience of losing a sum of money as great a preventive of crime, as the dread of starvation? And has not the law substituted the first for the last? It is evident that neither of the terrors presented by the law can affect a rich man; his wealth enables him to buy his paramour's silence as long as concealment is desirable; or if discovery is unavoidable, the world is charitable to the *venial trespasses* of the rich. A man in moderate circumstances cannot be much deterred from the pursuit of his desires, by the apprehension of being obliged to pay about thirty dollars a year, which is the charge generally made by the Overseers of the Poor. But how are the poor themselves, those who have nothing to lose and all to gain, affected by the law? The man's situation is not at all altered, by indulgence in a criminal intercourse; and the woman, instead of running any risk of being starved with her child, is fed and clothed better, and provided with more comforts in her situation than the honest wife of any day labourer. She is thus enabled to live well by the profits of crime; and may truly be said to *labour* in child-birth since by such labour she earns her livelihood.

I have dwelt longer upon this effect of the Poor Laws, than upon their agency in producing idleness and drunkenness, not because the effect was less apparent than in those cases, but because its consequences are more permanent and more pernicious. When an honest, industrious man is converted into a lazy vagabond or a drunkard, the state has lost one citizen, and (if he is not a married man) has but one pauper to support, and is relieved of the charge at his death. But when a young female is thus debauched, she becomes an annual rent charge on the produce of land in the county in which she lives, a charge, too, which is increasing with almost every year, and which cannot be terminated by her death; she having taken in her life certain and effectual means of multiplying and perpetuating it. But however indefensible this evident and direct corruption of female virtue may be in a political view, it is much more reprehensible in a moral and religious aspect. And here I do not hesitate to call upon all those, whose mistaken notions of charity and humanity have ranked them among the foremost opponents of a proposition to abolish the Poor Laws, to relinquish their opposition. If the arguments used in this letter and in my last, are just, and the conclusions to which they have led, are true; can any good man, reconcile to his conscience the longer toleration of laws tending to such mischievous results? Can he rest contented while he believes that his vote has sanctioned the increase of intoxication and idleness? Will not his own mind reproach him with having removed one of the most formidable barriers to the progress of seduction? And can he answer to himself and to his country, for having smoothed the way to the introduction of all the misery and vice which invariably attend on female depravity?

I remain yours, &c.
LUCIUS.

Extracts from the late numbers of the London Farmers' Journal—*received at the Office of the American Farmer.*

ON SMUT.—By the Editor.

We hope our readers will excuse the impertinency (if it have that appearance) of our entering personally into this question; and moreover, that they will not impute to us any thought or intention of a dictorial nature. We come to the subject as Mr. Jemmett has done, *considering ourselves in a state of tutorage*, as we must always remain as to the natural history, or philosophical inquiry into the origin and nature of Smut. We have stated before, that the *practical question* lies in a very small compass, and the results, in this view, are highly satisfactory and useful to cultivators: we have stated also, that there are certainly some *anamolies*, and we have given, at sundry times, some probable reasons for them; such reasons as must necessarily be admitted, unless better can be produced by those who must otherwise deny all the facts which have been so many times proved by express experiments. In addition to these facts, we have now another to record, which we have learned by recent communication with Mr. Ely, an American gentlemen, who has just been making the tour of these islands. In the North, he visited Mr. Falla, who has this season tried a very useful experiment on the prevention of Smut. We can state it but imperfectly, by recollection, from Mr. Ely's notes, but the main facts are sufficient for our purpose. Mr. Falla, along with his experiments in Spade Husbandry, this year sowed five short drills of wheat, the seed being smutty, and differently prepared, No. 1 was *brined* (and we suppose stirred and skimmed, then rinced in chamberlye, and dried in quick lime. No. 2 was pickled with (we believe) sulphate of copper; dried in quick lime. Two other rows were variously pickled, and one row was sowed without any preparation. The first row was quite free from smut; the second row had a few smutty heads; the other two we do not correctly remember; but the row sowed dry had nearly one third of smutty ears. Mr. Ely saw the experiment.

The whole of this experiment, and every other which has been purposely and properly made, is favourable to brining, pickling, washing, stirring, skimming, and cleansing of every sort. One mode may be something better than another, but they are generally useful. We cannot yet believe that either arsenic, sulphate or copper, urine, or any thing else, will, *by the touch*, prevent the disease; clean crops may be followed in these cases where the seed was sound, but let those who mean to try useful experiments on preventing smut, take wheat which they know to be smutted, or the conclusion is nothing.

In the letter of Mr. Jemmett, there is a strong corroboration of the utility of *steeping*; and, by practical inference, the *brining*, because the slowness of the operation, if well performed, and the much stirring that should be given, washes and cleanses (beside the skimming,) and often leaves the wheat in the tub several hours, even when steeping is not intended. Thus among several experiments tried with smutty wheat, properly *brining*, and skimming, will succeed better than any mode of picking the wheat on a floor, or of dipping it in pickle by means of a basket. If of smutty wheat moderately dressed, you make two parcels, take one parcel and dress it by *reeing*, and separate all light kernels, smut-balls, &c., then take the other and swim it in a good brine, and skim it, and steep it in the brine: lastly, take the first parcel and pickle it in sulphate of copper, letting it lie an equal time, and both parcels may grow equally free from disease. It is only by attending to these minutiæ that any nseful comparative modes can be established, or any positive conclusions formed.

It will unfortunately happen, notwithstanding all the little good we can do, or the reasonings we are enabled to state from the experiments of several of our correspondents as well as our own, that farmers in general will follow their usual modes, although they be sometimes successful and sometimes not so. The greater part make a brine to bear an egg; let fall their wheat gently into it; skim it and stir it; then add more wheat at several times, till the brine covers the top only a few inches. The stirring and skimming of the last being finished, they run off the brine, take out the wheat and lime it on the floor (not always, with fresh lime); the whole process for eight bushels of wheat not occupying more than an hour. Others wash their wheat in water, or in soap suds; some wet it on a floor, and put salt to it, some wet on a floor with old chamberlye; and some dilute the latter and put the wheat in it. The additions of arsenic, vitriol, and copperas, we need not mention, as they are more modern; they are used either by immersion, or as pickle on a floor, and sometimes after wheat has been brined. We are wholly faithless as to any good they do to the vegetation of the grain, except it be in *speediness*, which may be more injurious than useful. Now all the above have been followed with clean crops, and have partially failed; but it cannot hence be deduced with certainty, that when they have succeeded it was owing to the perfection of the pickle, nor when they have failed that it was a proof of a deleterious season. In all seasons, some have failed, and some have succeeded; because some persons have used sound and superior seed, and others have used smutted seed without being aware, and but slightly prepared as above. Of all the modes stated above, the first, though the oldest, is certainly the best, and it wants nothing added but leaving the wheat in the brine twelve hours. The rest may be all dispensed with, excepting as the cheapness of the steep may be an object; taking notice also in this case, that the wheat shew bold and level, and does not need skimming.

We do not mean to deny but that some seasons are attended with smut more than others; but it does not therefore follow, that Nature mocks our toils, and confounds our reasoning and our experiments. There is no reason for such an assertion, unless we could shew that the seed-corn used was generally sound and good, or that, if not so, it was adequately brined and steeped, or otherwise steeped in such a manner as has been shewn by experiment to be always successful. As no man can presume to say that he knows the first, or can suppose or believe the other, so no man of truly philosophical and liberal mind can assert that nature is so capricious, and art and industry so ineffectual, as to leave the farmer without security for the cleanliness of his crops, and nothing but a blind and foolish hope in preparation that can be made.

We have expressed this the more strongly, because we hope that that *dispute* about smut is drawing to a close. We confine ourselves to the practical question, and do not wish to enlarge or lead further into the speculation started by Mr. J. The supposition that the diseased plants *cannot find aliment to form gluten*, is wholly destructive of the utility of preparation, and smut could only be caused by poverty of soil. The truth is, that philosophical reasonings, applied to this subject, are extremely difficult and unsatisfactory; when they contradict the facts that are established, they must be wholly visionary; and if they be founded on them, they can go but little way. The disease, by the black powder, and by the odour, appears to be of the nature of a fungus; but how the germ should *get there*, instead of a wheat kernel, we are quite incapable of conceiving. It is a fungus for another reason, for it is certainly a vegetable production of the *cryptogamia* class, inasmuch as it has no visible inflorescence: the germ is formed before the ear is out of the sheath of the leaf; but it requires to be remarked, that there are frequently kernels of wheat in smutty ears, and the germs of these put forth the anthers of the blossom: we may add, that these kernels *find nutriment to form gluten.* But whatever degree of ignorance we herein labour under, we have abundant consolation in all other branches of physiology and pathology, animal and vegetable; and we sincerely hope that the prevention of smut will not be made to appear less probable and satisfactory to practical farmers, by all the ingenious and uncertain reasonings and conjectures that can be devised.

ON THE COMPARATIVE MERITS OF THE IMPROVED SHORT-HORNS AND HEREFORD CATTLE.

Horsford Hall, near Leeds, Sept 26, 1822.

Sir,

I have for a long time had an anxious wish to examine the question which has so much occupied the minds of agriculturists—*Whether the preference is to be given to the best Hereford Cattle or to the Improved Short-Horns?*

For this purpose, I last year made a tour into the north of England, and am now just returned from a similar journey of five hundred miles through Herefordshire and the adjoining counties. Nothing short of a personal examination of the animals in their respective districts, and in their *natural state*, could give me the means of forming an opinion satisfactory to myself; whether it may be satisfactory to your readers may, perhaps be doubted; but if I give it with impartiality, it will, I hope, receive candid attention, and not to be commented upon with too great severity.

The animals designated by the title *Improved Short-horns* are few in number, and they are widely diffused, as they have obtained high prices, and have been carried into various places to ornament many stocks. They have soft, silky, and mossy hair, and are very rich and mellow handlers; handsome and gay in colour; elegant in shape, large frames on very short and small bone; level and complete in all their points, and take on fat rapidly. They give a moderate quantity of milk, and do not propagate freely; they attain maturity at a very early period of life, and on this account, as well as from the extreme laziness of their dispositions, they are quite unfit for any labour.

The Herefords are more equal as a class than the improved Short-horns. Their offal is equally fine, many of them handle well, and have a very good quality of meat. They give very little milk, but breed well, and are hardy and healthy. Their colour is not attractive, their dispositions are much less placid, their skins thicker and more terse; they, therefore, take on fat less freely, especially at an early age. They do not attain so great a stature in the same number of months, and have never at any period, but particularly in youth, that perfect symmetry which distinguishes the Short-horns. Their hind quarters are very frequently coarse and short; their rumps low, their heads fleshy and heavy, and their breasts scanty and defective; but their shoulders are almost uniformly fine; their neck veins full, their flanks in some few instances good, and their twists generally excellent. I found a vast number with flat sides, very few with wide hips, and the hair of almost all was very short and harsh.

These, Sir, appear to me, upon a careful examination, to be the distinctions between the two rival breeds. I need scarcely add that I think there is a decided superiority in the Short-horns.

I have every reason to believe that on the same food, and in the same relative circumstances, the Short-horns would be as good at two years old, as the Herefords are at three. If, however, half a dozen of each were committed to the care of the same person, and brought up precisely in the same manner, the result would be highly interesting; and if they were brought up here, I would give the Herefords their food for nothing, if they were the conquerors.

I am well aware that without such a trial, there will continue to be a great difference of opinion on this question; but as my object is truth and usefulness, and not fallacy and controversy, I submit my remarks with every deference, to the judgment of your readers, not being at all anxious to enter into any defence of the opinion I have formed, if it can be proved to be erroneous, as I had no other wish to gratify, or purpose to serve, in making this laborious and extended survey of the two breeds, and in now informing you the result, than a desire to promote the interest of agriculture.

In the mean time, till the experiment is fairly tried, I must remind your readers that the comparison is not between the excellent breed of Herefordshire and the wretched cattle with *short-horns*, which find their way, very undeservedly, into many parts of the south, but between the best Herefords and that select and valuable breed to which the name of *Improved Short-horns* ought to be exclusively applied.

I am, your's, very respectfully,
JAMES ARMITAGE RHODES.

* * *

Washington, Dec. 14.

A CHALLENGE.

A VIRGINIAN proposes a wager of five hundred dollars, that he will exhibit at the Maryland Cattle Show, which may be held near Baltimore in the year 1824, a native Bullock of Virginia, of greater nett weight than any that can be exhibited at the same time and place, by any NEW YORKER, whose Bullock shall be a native of that State. The address of the Virginian is left with J. S. Skinner, Esq. Editor of the American Farmer, Baltimore, through whom the preliminaries may be adjusted, should this offer be accepted at any time previous to the first day of March next.

It is worth remark that every facility is in this case offered to New York, over Virginia, in having water carriage the whole distance to Baltimore; whereas the Virginia Bullock must travel by land.—*Editors Nat. Intel.*

It is worthy of observation as illustrating the progress of Internal Improvements, and the facilities of transportation, that, should the above challenge be accepted by a Grazier residing in the Western parts of the State of New York, his bullock might be brought to Baltimore with more ease and despatch than the Virginian's, from a distance of near two hundred miles. A fat heavy bullock coming by land, will not travel more than five miles per day—whereas the New Yorker would put his in a canal boat, and bring him to Albany—thence to New York in the Steam boat—thence to Norfolk in the steam brig, and thence to Baltimore in another steam boat—so that his bullock need not lose a meal, nor an hour's sleep, or undergo any soreness or fatigue. These circumstances show too, how suitable is the vicinity of Baltimore—in the centre of the Union, for great Agricultural Implement and Seed Establishments, Cattle Shows, &c. &c.; and for the publication of a NATIONAL JOURNAL OF AGRICULTURE,—and such we have endeavoured to make—the AMERICAN FARMER.—*Edit. Am. Far.*

* * *

FOR THE AMERICAN FARMER.

MANUFACTURE OF CASTOR OIL.

MR. SKINNER,

Having seen several inquiries in your valuable paper, concerning the manner of making Cold Pressed Castor Oil, to which no answer has been given, I am induced to make the following communication:

The direction of the Edinburgh Dispensatory, is, to deprive the seed of their shell, (which must be useless,) bruise them, put them into a hempen bag and express the oil by means of a cold press, in the same manner as linseed oil.

Not having seen an oil press, I am unable to direct how it should be constructed, but suppose it very simple.

Why there should be so great a preference given to the cold pressed oil, I do not know.—Many families in my neighbourhood, prepare it, for their own use, by decoction; and, on comparison, I have found it no more nauseous than the other. I have seen it two years old, without having become at all rancid, and the bottom of the bottle entirely clear from that cloudiness, which is observable in cold pressed oil of the same age.

To make it—bruise the seed, inclose them in a coarse bag, put this in a pot of water, and boil as long as any oil arises, which must be skimmed off and put into another pot, placed conveniently, to which apply a moderate heat, to evaporate the water taken off along with it, taking care not to over heat the oil, which may easily happen after all the water has been evaporated.

It is said the seed afford one fourth their weight of oil; if so, their culture must be very profitable at the present price of the article. Its value must depreciate very much, when its domestic preparation becomes more common, and this is only prevented by the unjust preference given the cold pressed oil, which cannot be so conveniently made in every family.

When the seed are freed from the shell and white skin, that covers them, and made into an emulsion, they operate in the same dose, as mildly and effectually as the oil. For every purpose, the fresh seed only should be used; those which are old are acrid, and unpleasant in their operation.

If you think these remarks would do any benefit to the public, you can publish them; though I should be very glad if the necessity could be done away, by the subject being taken up by some one better able to do it justice. Your's, &c. F.

Charlotte Co., Va., Dec. 10th.

THE FARMER.

BALTIMORE, FRIDAY, DECEMBER 20, 1822.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $7 25—Howard st. Superfine, $6 87½—Wharf, do. 6 12½—Wheat, white, $1 35 to 1 40—Red do., $1 27 to 1 30—Rye, 70 to 72 cents—Corn, 60 to 63 cts.—Oats, 35 to 37½ cents—Beef, live cattle, $5 to 5 50 per cwt.—Beef, 8 to 10 cents per lb.—Bacon, round, 10 to 11 cts.—Pork $4 50 to 5 50 per clb.—6 to 8 cts. per lb.—Mutton, to 6 cts. per lb.—Beans, $1 25 to 1 37½—Peas, black eyed, 55 to 60 cts.—Clover seed, $9 to 10—Timothy seed, 4½ to $5—Flax seed, 75 to 80 cts.—Whiskey, from the wagons, 30 to 34 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, none in market—Herrings, No. 1, $3 62½ per bbl.—No. 2, $3 37½—Fine salt 80 to 90 cts. per bush.—Coarse, do. 62½—Butter, 22 to 25 per lb.—Eggs, 25 cts. per doz.—Turkeys, 62½ cts. to $1—Geese, 28 to 37½ cts.—Chickens, $1 50 per doz.—Straw, $10 per ton—Hay, $17.

Maryland Tobacco—of the fine qualities, none in the market—Good Patuxent, $6 to 8, scarce—Inferior, $2 to 5, plenty and dull—seconds, $1 25 to 5—Very little doing in the market.

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Four hundred and twenty-five acres, situate one fourth of a mile South from the Washington turnpike, eleven miles from Baltimore, and one from Waterloo Tavern. A laboured description is unnecessary. We will just observe that the tenant says he made with four hands, this bad season, two hundred barrels corn, say five barrels to the acre, together with a fair proportion of Hay, Oats, &c. &c. There is a very tolerable Dwelling, five rooms on the first floor, a large Tobacco House, new; and other out houses. The fruit, peaches particularly, excellent mostly from Mr. Cromwells' orchard, and selected elsewhere. Some fine grafted cherries and apples, &c. &c. Garden well stocked with every kind of choice fruit. The land kindly to plaster. The country excelled no where for health. To an Eastern Shore-man, it would be a truly delightful exchange; *in short, it is absolutely the cheapest land that is, or will be in the market.*—Apply to John W. Berry, Baltimore—Mr. Sullivan, adjoining the premises—to Mr. J. G. Proud, or at Merrel's Tavern.

December, 1822.

PATRICK NEVILLE,

Now in the service of the Editor of this paper, *on his farm*, wishes to make an engagement as an overseer, for the next year. His present employer will answer any enquiries as to his character and qualifications.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, at the North West corner of Market and Belvidere-streets, Baltimore; *where every description of Book and Job printing is executed with neatness and despatch*—Orders from a distance for Binding, with proper directions, promptly attended to, addressed to J. Robinson, Baltimore.

THE NAVY.—*The attention of its officers to the interests of American Agriculture—letter to the Editor, dated*

U. S. Ship Constitution,
Gibraltar, 16th Sept. 1822.

Dear Sir,

I have received your's of the 16th and 23d of July, and am pleased at your determination respecting the Andalusian Horse and Mare; *(a.)* not that it would have been the least disagreeable to me, to have carried them to you, but from the belief, since the examination I have made of this race of animals, that the best that could be had here, would be but little valued in the U. States. I did not see, from Cadiz to Seville, a horse, which, in our country, would bring $200; nor a mare which could be sold at $50. We shall sail soon for Tunis, where I will inform myself of the habits, &c. of the broad-tail sheep, and if any are of finer wool, I will procure a few. I am very sorry at not being able to see the letter of Mr. Jefferson, *(b.)* which you refer to—the papers which you so obligingly sent me, have been searched in vain, for it.

I am informed that the best Jacks, any where on the coast of the Mediterranean, are at the Island of Majorca, *(c.)* from whence I intend to take a Jack and Jenny to our country. Should nothing occur to prevent our going to Malta, I will bring you, from thence, a Jenny, to pair with your Jack. *(d.)* In visiting the farms at Minorca, with Mr. Ladio, our consul, who has several of his own, and bestows much attention to farming, I saw two extraordinarily fine mules, and on asking him if I could see the Jack that was their sire, he pointed to a small Jenny that was in the field with them, and assured me that they were the offspring of her and the horse in the adjoining lot, a slender formed animal and not exceeding 15 hands. He also said that all their best mules are from the horse and jenny, and that they are more docile than those from the Jack, *(e.)* I am assured by those whose information is most to be trusted, that an *Arabian* horse is not to be found this side of Egypt *(f.)* and the best Barbs are to be had in Morocco, but the price is from 600 to $1000, besides a high duty for exportation. I have not seen any of the Mahogany cattle, *(g.)* such as you mention. The cattle that I have seen in Spain, appear to be nothing superior to ours; nor have I seen any where on the coasts of the Mediterranean, any that appear better than those in America; except a race of white cattle at Naples, used for the draught. I was informed by a gentleman, who, in supplying the government with timber, had used thirty yoke of them for two years, that during that time, they had constantly travelled from twenty to twenty-five miles a day, excepting Sundays and the holidays—the place from whence he drew the timber, being from forty to fifty miles distant from Naples. He said they were the offspring of the Spanish Bull and Hungarian Cow, or the Hungarian Bull and Spanish Cow. They are generally fifteen hands high, their bodies long, thin and deep—legs long—a small light head, a sharp muzzle, resembling the deer—colour entirely white, except a black nose, ears, and the tuft of the tail. They are most frequently worked in the thills of a cart, and are spirited and walk as quick as a horse, and appeared not to suffer from heat, more than a horse. *(h.)* I would have bought a bull and a cow, had we have been returning down the Mediterranean, but to have taken them to Smyrna and the Archipelago, would have caused too much trouble and expense. I have inquired, whenever opportunities of obtaining correct information have occurred, the quantity of milk given by their cows, and have, no where, heard of so much as in our country, except at Genoa, where a good cow gives about fourteen quarts per day, and in Tuscany from fourteen to sixteen. *(i.)* I intend to carry home several of the Spanish hogs, and some of the sweet acorns on which they are principally fed. I believe the tree will grow well in Maryland and Virginia. They are a small oak about the size of a large peach tree, and bear very abundantly every year. I have seen no domestic fowls equal to those we have, and though I have often been at Malta, I never saw or heard that their geese and ducks were better than those elsewhere, *(k.)* but should I return there, which I hope to do, I will ascertain the truth. There is promised me some hares and red bill partridges; the large pigeon of Barbary we have on board. Of grass seeds I shall get none—clover only is sowed where I have been.

Respectfully yours,
JACOB JONES.

Explanations of, and notes on the preceding letter, by the Editor of the American Farmer.

(a.) The Agricultural Society of Albemarle, Virginia, impressed with a belief that the Horses of that state would be much improved by the introduction of the Andalusian Stallion from Spain, and aware that one could not be obtained without special permission from the King—that difficulty was overcome through the agency of Mr. Madison, who procured the license; but it was never used until 1819, when the Society transferred it to the Editor of this paper, for whom R. Oliver, Esq. placed a credit in Spain to the amount of whatever sum might be necessary to procure a pair of that breed of Horses—in order that the breed, if as valuable as was represented, might be *perpetuated* in this country.—These documents were all put into the hands of Commodore Jones, who offered, most politely and promptly, to execute the views of the Virginia Society—soon after, the Editor opened a correspondence, which has proved to him highly valuable and interesting, with a connoisseur of great taste in New York, Charles H. Hall, Esq. on the subject of domestic animals generally, and especially the Horse. Mr. Hall had himself been concerned in the importation of several horses of this particular race, and his views and opinions, founded on personal knowledge and observation, were altogether so pointedly unfavorable and discouraging, and his reasoning so conclusive, that we determined to present them to Commodore Jones, and to countermand the order, believing that we should not be justified in investing so large a sum of money—and in trespassing on the civility of a gallant officer, to procure an object so little likely to meet the expectations of our friends in Virginia; or to afford an equivalent benefit to the country. It seems that Com. Jones fully approves this determination—confirming what had been predicted by Mr. Hall, and this explanation is now made, not so so much to gratify an interest, which may be taken in it by our readers in general, as to make record of the course we have pursued, for the satisfaction of the Albemarle Agricultural Society, and especially the Committee of it; to whom the object was particularly entrusted, and by whom the trust was transferred to the Editor of the Farmer.

(b.) This is in reference to Mr. Jefferson's letter, page 320, vol. 3d. American Farmer—wherein he says of these sheep—"It is to be "observed that there are different races of them, "very distinct and very different in merit.—"Three of these have fallen under my observation:—1st. Those from the Cape of Good "Hope, with tails turned up like that of a nicked "Horse, long legs, light bodies and slight fleece. "2dly. Those from Algiers, of somewhat less "stature and better form and size—and 3dly. "Those from Tunis, of low stature, round bodies, full fleeces, of good quality, hardy, thrifty, "always fat, and of high flavoured flesh. It "must have been of these last that Gen. Eaton "brought to this country. I received, myself, a "ram and ewe, brought in one of our vessels "from Tunis direct; but the ewe would never "breed; her massive tail never admitting the "commerce of the ram. I have bred from the "ram, in and in, for ten years past, with a different race, and have found that when a ewe "gets to be about 7-8ths pure blood, the same "obstacle becomes so enlarged as to prevent "procreation." It was to this letter, that we wished to call the attention of Com. Jones. The facts are somewhat inexplicable.

About 12 months past, the Editor received from Com. Jones and Capt. Booth, a pair of sheep which answer in form and character to the "Tunis Mountain-broad-tail" Sheep, described by Judge Peters, as the best of that race, and to the engraving of them in the Memoirs of the Philadelphia Agricultural Society, with the exception of being, undoubtedly, *coarser* in the fleece than our *common* sheep. The ewe has been seen to yield willingly to the ram's essays to embrace her, but it is believed his attempts, have been so far, defeated, as they have been fruitless. Yet, how is it that the race is perpetuated in their native country?

The subject is worthy of more extended observation, and we are only surprised, that facts so extraordinary, should not have attracted the more particular attention of professed naturalists.

(c.) It was here that the fine Jack, Don Carlos, was procured, which was lately sold by Purser S. Hambleton to Henry S. Turner, Esq. of Jefferson County, Va. and which took an honorary premium at the last Maryland Cattle Show.

(d.) The history of this very superior animal, speaks nothing to the credit or discernment of the landholders in Maryland. Sancho was brought from the Mediterranean by the late Capt. Gordon—was badly kept and estimated on the Eastern Shore of Maryland. The Editor hearing of him, gave $500 for him, and placed him on his Stock Farm. He was offered to the public use, at the low rate of $8 per mare, was travelled from one neighbourhood to another, and not more than eight mares were offered for his services!! He was one of the best Jacks ever seen in Maryland, and was again sold for what he cost, to Mr. Bell, of North Carolina. Such is the unaccountable subserviency of Farmers, to the grossest prejudices.

(e.) This is contrary to the assertion of Buffon, who says, the Bardeau, the name given to the animal procreated between the Horse and the Ass, is much smaller than the mule, and seems to preserve the dimensions of its mother, and the mule retains the dimensions of the mare. Hence, he says, that in mixed species the *size of the body* appears to depend more on the mother than on the father. In the American Farmer, vol. 3, page 108, we published the most satisfactory paper we have ever seen on the "Form of domestic Animals," and the *principles* of improving them, by Henry Cline, Esq. an eminent Surgeon of London. He maintains that experience has proved that crossing, has only succeeded, in an eminent degree, in those instances, in which the females were larger than in the usual proportions of females to males, and that it has usually failed, when the males were disproportionally large. For instance, if a well formed large ram be put to ewes proportionally smaller, the lambs

will not be so well shaped as their parents ; but if a small ram be put to larger ewes, the lambs will be of an improved form. The improvement, says Cline, depends on this principle—that the power of the female to supply her offspring with nourishment is in proportion to her size, and to the power of nourishing herself from the excellence of her constitution. The size of the fœtus is generally in proportion to that of the male parent, and therefore, when the female parent is disproportionably small, the quantity of nourishment is deficient, and her offspring has all the disproportions of a starveling. But when the female, from her size and good constitution, is more than adequate to the nourishment of a fœtus of a smaller male than herself, the growth must be proportionately greater. The larger female has also a greater quantity of milk, and her offspring is more abundantly supplied with nourishment after birth.

To produce the most perfect formed animals, abundant nourishment is necessary, from the earliest period of its existence, until its growth is complete.

(f.) The following extracts are taken from a very elegant work in our Agricultural Library—entitled "The History and delineation of the Horse," &c. &c. by John Lawrence—wherein the author, as a naturalist and a scholar, treats of the appropriate uses, management, and progresssive improvement of each variety; with a particular investigation of the character of the Race Horse, and the business of the turf, illustrated by anecdotes and biographical notices of distinguished sportsmen. The work exhibits exquisite engravings from original paintings of Flying Childers, Eclipse, and many other celebrated English horses; and contains instructions for breeding, breaking, training, and the general management of the horse, both in a state of health and of disease ; we propose, as the occasion and circumstances suit, to make copious extracts from this work—under the highly gratifying belief that the agricultural publick is awakening to a proper sense of the interests they ought to feel in the improvement, and proper management of this noble animal.

Edit Am. Farmer.

"Having given a concise general view of the history of the Horse, in ancient times, and of the progress which had been made by the ancients, in equitation and management, it remains to proceed with the same subjects, and to describe their actual state in various countries, at the present day."

"The finest and most valuable races of Horses, are still found in those countries, which were distinguished by the same superiority more than two thousand years ago. From thence have breeds of all other countries been improved, and the most valuable properties of the genus have been derived from the South-Eastern Horse.—Occasional recourse is still had to the Levant, for Stallions, by every nation in Europe, desirous of improving or preventing the degeneration of their breed, the case even in our own country, although we have long since excelled in figure, size, form and every valuable quality, the best models which the original breeding countries could produce."

"The Spanish Horses of the present time, of which I have seen some of the best specimens, are of a larger breed than of old, and appear to have a considerable mixture of the Northern blood, the foundation of which change might, probably, be laid during the connexion of their monarchy with the Empire of Germany."

"The Spanish resemble some of the English half and three part-blood Horses. The head rather large and coarse, sometimes Roman-nosed ; long ears, fine full eyes, mane thick and flowing, long forehead, shoulders and breast large, also the carcase, the croup round and full, yet the loins rather too low. Legs clean and the sinews distinct, pasterns often too long, like the Barbs ; feet long and deep, like those of the mule, with high and narrow heels."

"Having given a general outline of the Horse, as he is at this day found in Europe, Britain excepted, and in part of the Russian dominions, I proceed to trace him in Asia, Africa and Southern America ; concluding with our own country, and the United American States, where the subject rises into its highest degree of importance."

"In the Asiatic dominions of Rusia, and in Asiatic Turkey, we begin to meet with the unmixed Southern Horse. It has already been stated, that the originals of this species are found exclusively in Arabia and Barbary ; and the species is produced in the greater perfection, in the circumjacent countries, in proportion to their proximity to its indigenous soils. But it degenerates both in the high Southern latitudes, and in any considerable advance towards the East ; thus, Horses are not found in perfection either in Southern Africa, India or China ; but of greatly diminished size, and although bearing the external conformation of the blood Horse, almost totally divested of his admirable qualifications."

"I shall begin with the original coursers, the Arabian and the Barb, proceeding to notice their varieties, and their bastard produce, in those countries of nearly the same parallel, or where-ever they are found. Of these Horses, we are enabled to speak with all the certainty of experimental observation, their species having long been naturalized in this country, from successive importations of individuals, within the last two hundred years. *Arabia Deserta* is allowed to be the breeding country of the purest and highest bred Racers, that is to say, possessed in the highest degree, of those qualities which distinguish the species, and which are generally best ascertained in their produce. This "glory of Arabian zoology," is found in the Northern part of the desert, between Suez and Persia, and is bred by the *Bedouin* Arabs."

"The Arabians divide their Horses in three classes : the *Kochlani*, or *Kehilani*, the *Kehidischi*, and the *Attichi*. The first are the noble, as they are styled, or the original high-bred coursers, the produce of the middle, or mountainous country, the blood of which has been preserved pure and uncontaminated by any alien mixture or cross, as the Arabs pretend, for more than two thousand years. However, we may justly doubt the accuracy of an account like this, in an affair that must necessarily be liable to accidental, as well as wilful deviations, implicit credit is certainly often given to less credible reports. The Arabians are, above all nations, attached to their Horses, and the most scrupulous, both with regard to their pedigrees, and their care and precaution in breeding. The names, marks, colours, age and qualifications of all the superior stallions, and mares, are generally known among the breeders of that country, as among the breeders of Race-horses in this ; but they carry their scrupulosity and precaution far beyond us. On the covering a mare, witnesses are called, who give a solemn certificate of the consummation, signed and sealed in the presence of the *emir*, or some magistrate. The names and pedigrees of the horse and mare are set forth in this instrument. This ceremony is repeated when the foal is dropped, and a fresh certificate is signed, in which the day of birth is registered, and the foal particularly described.—These vouchers, like the title-deeds of an estate, pass with the Horse when sold, and in them consists a material part of his value. The prejudices of the people, concurring with their leading interest, we need entertain the less suspicion of their fidelity, which is further confirmed by the tetimony of ages in their favour, by the apparent marks of purity and integrity in their breed, and by the unrivalled excellence of those animals in which they deal, and disperse over so many countries."

"The Arabian Horses are never of any very large size, seldom indeed reaching the height of fifteen hands. They excel in sleekness and flexibility of the skin, and in general symmetry, from the head to the lower extremities. The eye is full and shining, the head joined, not abruptly, but to a curved extremity of the neck ; the shoulders capacious, deep and *counter*, or inclining to flat, and declining considerably into the waste ; the quarters deep, and the fore arms and thighs long, large and muscular, with a considerable curve of the latter ; the legs flat and clean, with the tendon or sinew large and distinct ; the pasterns moderately long, the feet some what deep ; the substance of the hoofs fine, like that of the deer. This general description may suffice until we come to treat of the English Race-Horse, inseparably connected with the Arabian."

"The Arabians breed their Horses for sale and exportation, and I understand are always ready to part with those of their most esteemed breeds, for an adequate price, which may sometimes amount to five hundred pounds or upwards, others being attainable at, perhaps, a tenth part of that sum. It is said they are not so willing to part with their mares. Perhaps *Aleppo*, *Suez*, *Bassorah*, on the Persian gulph, *Mecca* and *Mocha* in *Arabia Fælix*, may be quoted as the readiest places of access to the true breed of Arabian coursers. But Horses under the general names of Arabians, are imported into Europe, from all parts of the East, where they are almost invariably purchased by persons totally unskilled, unless, perhaps, a few exceptions may be made, with respect to military purchasers; and they, as such, had they power of selection, would scarcely choose the true courser, inferior, in a military view, to Persian, Egyptian or Turkish horses."

"The last accounts we have from the deserts, confirm those of the old travellers, respecting the mode of life of the wandering Arabs, or *Bedouins*, and their treatment of their cattle ; in fact, the customs of these people seem as stable and permanent as the very earth on which they dwell, and he who would wish to prepare himself for the ceremonial of an entertainment in an Arab tent, could not do better, than rehearse a lesson from some early chapter in the Old Testament. It is said that the Horse is so general a property in those countries, that even the meanest among the Arabs, possess some of them. As in the Irish cabin, so in the *Bedouin* tent, the whole family, quadruped as well as biped, eat, drink and sleep, and are sheltered together ; in the latter, mares and foals, men, women, and children, take their rest promiscuously ; and ofttimes are to be seen the heads of a child and a foal, reclined on the same pillow, the belly, breast or neck of a mare. Nor do the parents apprehend any danger from such license, for it is asserted, that the mares and foals, will not only permit all kinds of play from the children, but that the former have the sagacity and sensibility to tread with caution, least they should hurt them. Nor need this be looked upon as without the verge of probability, at least I do not regard it, because I have myself had a mare, endowed with similar faculties of good nature and intelligence, and have repeatedly witnessed her care to avoid hurting inferior animals. She would race and gambol, and play with me, or with her groom, in the field, like a favourite Spaniel; and when mounted on her, I was assured in case of accident, I had nothing to fear, either from affright or carelessness, far less vice in her; and I have no doubt, had I ever fallen from her, and my foot hung in the stirrup, that she would have instantly stopped, until I had extricated myself; in truth, I owed much, perhaps my life, to her care. Horses are confirmed in this way, by kind and considerate treatment The Arabians treat the horses, *habitually*, even with the utmost fondness, having neither the desire nor the necessity of beating them, the generous and docile animals, do every thing which is required of them, in consequence of indication and persuasion:—hence, probably, the kindness and generosity of temper supposed to be inherent, and a characteristic in the Arabian horse."

"It is remarkable, that we have, in all probability, derived from the Arabians, the common custom of throwing water upon the back of the mare, the instant of the descent of the horse.* They have another custom of shearing off the hair of their foals at eighteen months old, in order to promote its growth. At two years old, or two years and a half, at longest, the foals are taken in hand and taught their duty; and those horses, or rather mares, (for the Arabs, like their forefathers, and for the same reasons it is said, always prefer mares) are constantly kept bridled and saddled at the door of the tent, throughout the whole day. It has been said, that they are, in that place, made fast by one of the fore legs, and that the leg becomes often stiffened, or injured, in consequence."

"In the above situation, these animals remain unsheltered, whatever may be the state of the weather, and unfed; for by custom, they are never fed in the day time, but allowed water several times. At sun set, they are fed for the night, with the liberal allowance, if we may credit travellers, of half a bushel of well sifted barley to each nag, given in a bag which is left fastened to the head. In March, the grass season in those countries, the horses are either soiled at home, or turned loose into the pastures, whilst the grass lasts, which cannot be long in such a climate. During the other seasons of the year, they are supported on barley straw, barley, camel's milk, and perhaps dates.

"The horse furniture of the lower classes is most simple, and many ride, as has been said, in the primitive style, without either bridle or saddle: but amongst the superior, the Turkish saddle is in use, having the posterior part, or cantle, so high, as to reach half way up the rider's back; and flat stirrups which contain the whole foot, the toe of the stirrup iron being made sharp, to answer the intent of a spur. They use no girths, ride excessively short, and are expert in all those feats of horemanship which depend on the *equilibre*, and which have been already adverted to, in the practice of the ancients."

"Here follows an Arabian pedigree, which was hung about the neck of the horse. Various old pedigrees of Arabians are in print; this is probably the latest, the horse being brought from Egypt with our troops, a few years since, by Col. Ainsley:—

"In the name of God, the merciful and compassionate, and of Seed Mahommed, Agent of the High God, and of the companions of Mahommed and of Jerusalem. Pralsed be the Lord the Omnipotent Creator. This is a high-bred horse, and its colts'-tooth is here in a bag, hung about his neck, with his pedigree, and of undoubted authority, such as no infidel can refuse to believe. He is the son of Rabbamy, out of the dam Lahahdadah, and equal in power to his sire, of the tribe Zazahalah; he is finely moulded, and made for running like an ostrich, and great in his stroke and his cover. In the honours of relationship, he reckons Zalicah, sire of Mahat, sire of Kellac, and the Unique Alket, sire of Manasseh, sire of Alsheh, father of the race down to the famous horse, the sire of Lahalla; and to him be ever abundance of green meat, and corn, and water of life, as a reward from the tribe of Zazahalah, for the fire of his cover; and may a thousand branches shade his carcase from the hyena of the tomb, from the howling wolf of the desert, and let the tribe of Zazahalah present him with a festival within an enclosure of walls; and let thousands assemble at the rising of the sun, in troops hastily, where the tribe holds up under a canopy of celestial signs, within the walls, the saddle with the name and family of the possessor. Then let them strike their hands, with a noise, incessantly, and pray to God for immunity, for the tribe of Zoab, the inspired tribe."

(g) Purser Hambleton had mentioned to the Editor, a beautiful race of *milk* cattle in Italy, of mahogany colour.

(h) This is the valuable breed of a bull and cow imported by Com. Bainbridge, and now the property of John Middleton, Esq. of S. Carolina, where we hope they will be properly estimated, as they undoubtedly constitute one of the *most valuable acquisitions* ever made in the *Southern* states. These cattle were some time in the possession of the Editor, who became convinced by personal observation that for activity and adaptation to all kinds of farm labour, and for *capacity to withstand the heat of a Southern climate*, they fully justify the character here given by Com. Jones—the colour, form, and texture of their skin, all indicate these capacities—we repeat the hope that they may be duly appreciated and fully tested.

(i) With respect to cows for *milk*, we have nothing to gain from abroad—except, perhaps, the Ayrshire cow of Scotland, mentioned by Sir John Sinclair.

(k) We had been told they were of superior quality at *Trieste*, by Majoi W. B. Barney

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* Naturalists tell us that ardour of temperament in the male, so necessary to successful sexual embraces, is hurtful in the female, and almost always prevents conception—hence the custom of inflicting blows, and "throwing water" immediately on the consummation of the act upon the crupper of the she ass, which is represented as amongst the most lascivious of all animals,—in the case of the dog and the cat, yet more ardent, nature has provided a peculiar structure of the machinery of generation, which prevents the retreat of the male until the convulsions of the internal organs have had time to be appeased. We would have the reader to recollect, that some views of natural history connect themselves with the leading topicks of this Journal. In fact, we mean to make natural history itself, one of its leading features, and of course we are sometimes forced to have recourse to illustrations of a character that we would otherwise avoid—we must endeavour to employ terms the least offensive, to make ourselves understood, and trust for the rest to the good sense of those who choose to follow us in our investigations—we are conscious of the best intentions, and "*honi soit qui mal y pense.*"

THE AMERICAN GARDENER;

Or a Treatise on the Situation, Soil, Fencing and Laying-Out of Gardens; on the making and Managing of Hot Beds and Green-Houses; and on the Propagation and Cultivation of the several sorts of Vegetables, Herbs, Fruits and Flowers.—By WILLIAM COBBETT.

(Continued from page 299.)

CHAPTER II.

On the making and Managing of Hot Beds and Green-houses.

HOT-BEDS.

63. I am not about to lay down rules for persons who can afford to have *cucumbers in March*. This amounts to something little short of *folly* in England: in America it would be something worse. But, *Hot Beds*, as things of *real use*, are more necessary in America than in England; because in the former country, the winter will not suffer to exist in the open air many plants, which are wanted to start with the warm sun, and which plants the winter *will* suffer to exist in the open air in England The American *Spring* bears no resemblance to that of England, which comes on by degrees from the end of February to the beginning of June: while the American Spring cannot be said to be of a fortnight's duration. There is in fact, no Spring: there is a Winter, a Summer and an Autumn, but no Spring; and none would ever have been thought of, if the *word* had not come from Europe along with many others equally inapplicable.

64. This sudden transition from a winter, which not only puts a total stop to, but effaces all traces of vegetation, to a summer, which, in an instant, creates swarms of insects, or warms them into life, sets the sap in rapid motion, and in six days, turns a brown rye-field into a sheet of the gayest verdure; this sudden transition presents the gardener, or the farmer, with ground well chastened by the frost, smoking with fermentation, and with a sun ready to push forward every *plant*; but, alas! he has *no plants!* I know, that there *are persons*, who do preserve lettuce, cabbage, and other plants, during the winter, and that there *are persons*, who rear them on *Hot-beds* in the Spring; but what I aim at, is, to render the work easy to *farmers* in particular; not only as the means of supplying their *tables*, but the stalls of their cattle, and the yards of their sheep and pigs. In the summer (a cruelly dry one) of 1819, who, within many miles of my house in Long Island, had a *loaved cabbage*, except myself? During June, July and August, I allowed *fifteen a day* for my own family: I gave *ten a day* to one neighbour; to others I gave about *five hundred*, perhaps, first and last; and, the plants were all raised *in one single light, four feet by three and a half*, on a hot-bed, made on *the 19th of March*. The hot-bed had six lights altogether, and was about twenty feet long; but, the part appropriated to these cabbages was only four feet by three and a half. The plants came out of this bed on the *20th of April*, and were planted three inches apart on another bed, without glass, but covered at night with a cloth. On the *20th of May*, they were planted out in the open ground; and, on the *17th of June* we began to eat them. All these cabbages, *Early Dwarfs*, *Early Yorks*, *Sugar Loaves*, and *Battersea*, (coming in one sort after the other) amounting to about *four thousand* in number, stood, when planted out, upon rather less than *thirty rods of ground*; and the earliest sorts, while we were using them so liberally, were selling in New. York market at from 6 to 4 pence a piece.

65. To *preserve during Winter*, such a number of plants, or, indeed, *any* number, however small, is a work of great difficulty, and is merely *chance*-work after all. Besides, fall-sown plants are not so good as spring-sown. They become *stunted;* and they very frequently go off *to seed*, instead of producing *loaves*. However, it is not my business to treat here of *cultivation:* I am here to speak of the *Making* and *Managing* of hot-beds. This must, of course, include a description of the *Wood* and *Glass*, when formed into *Frames* and *Lights*. But, first of all, I must treat of the making of the bed.

66. The *materials* of which the bed is to be composed, and the manner of preparing those materials, are first to be spoken of.

67. Dung of horses, cattle, sheep or pigs, is used to make the bed of. Either may be *made to do*, with a greater or less degree of care and trouble; but, the best possible thing is *dung from the stable*, taken away before it has been *rotted*, short and long promiscuously, but rather *long* than short. If there be a large proportion of short it may have any *litter* added to it; any *broken* straw or hay or corn stalks, in order to make a due mixture of long and short.

68. This choosing of the materials being a very important point, I shall, in order to make my instructions clear, *suppose a case*, and such a case as will be very clear to every American Farmer.

69. By the month of March he has always a heap of dung, which has, from time to time, been thrown out of his stable, during the winter and fall. This is *some long* and *some short*. Let the whole of this (supposing there to be *three horses* kept) be taken; and, in addition, a pretty good wagon load of long *stained* stuff from the cow-yard, or sheep-yard. Toss it down in a heap, near where you are going to make the bed. Then begin on one side of it, and take the stuff and begin making a fresh heap of it. *Shake every fork full well to pieces*, and mix well the long with the short; and thus go on, till you have the whole in a round heap rising to a point.

70. The second day after this heap is made it will begin to send forth *steam*. Let it remain three days in this state; that is to say, *four* clear days after the day of making the heap. Then turn the heap back again; *shaking all well to pieces*, as before, and bringing to the inside that part of the stuff which was before on the outside of the heap. Let it remain now *three* clear days after the day of turning. Then turn it again; *shaking well to pieces*, as before, and bringing again the outside stuff to the inside. When it has remained *two* clear days in this state, it is fit to make the bed with.

71. In the making the bed you will proceed as directed below; but I must first describe the *Frame* and the *Lights*. Were I speaking to persons living in a country, where there is no such thing as a hot-bed frame, I should be obliged to enter into a detailed mechanical description. But, as Frames and Lights are to be seen in almost every considerable town in America; and, as I have known very few American Farmers, who are not able to make both with their own hands, without any help from either carpenter or glazier, it will be necessary merely for me to say, that the Frame is of the best shape when it is *eighteen inches* deep at the *back* and *nine inches* deep at the *front*. This gives *slope enough*, and especially in a country where there is so little rainy weather. The *Frame* is the wood work, on which the *Lights*, or glass-work, are laid. There needs no more than a *good look* at a thing of this sort to know how to make it, or to order it to be made. And, as it is useless to make a hot-bed without having the Frame and the Lights ready, I shall suppose them to be prepared. I suppose a *three-light* Frame, four feet wide and nine feet long, which, of course, will make every Light *three feet wide* and *four long;* because, the long way of the light fits, of course, the cross way of the Frame.

72. Now, then, to the work of *making the bed*. The front of the bed is, of course, to be *full South*, so that the noon sun may come right upon the glass. The length and width of the bed must be those of the Frame. Therefore, take the Frame itself, and place it *on the spot which you mean the bed to stand on*. See that you have it rightly placed; and then, with a pointed stick, make a mark in the ground all round the outside of the Frame. Then take the Frame away. Then take some sharp-pointed straight stakes, and drive them in the ground, at *each corner* of this marked-out place for the bed, and one or two on the back and on the front side. Let these be about four feet high. They are to be your guides in building the bed; and, they ought, therefore, to be very straight, and to be placed *perfectly upright*. Each stake may be placed about an inch *further out* than the mark on the ground; for fear of having the bed too narrow; though, observe, the bed should be as nearly the same length and breadth as the Frame as it is practicable to make it.

73. In order to *begin* the work well, it is a very good way, to put some *boards* on their *edges*, on the ground, at the ends and sides, on the insides of the stakes; so as to have a sort of open box to begin to make the bed in. The *eye* of a *gardener* scorns such assistance; but it is very useful to persons unused to the work.

74. Thus, all being prepared, you begin *making the bed*. Begin taking the dung on the side of your heap nearest to the spot where you are building the bed. Keep taking up clean to the ground. Have shovel as well as fork. Take long and short fairly, and mix them well as you put them in. Shake the stuff in such a way as not to suffer any *lumps*. Shake every straw from every other straw. Let the bed *rise in* all parts together as nearly as possible. That is to say, do not put *much* in one part at one time. *Beat* the whole down with the fork as you proceed. When you have shaken on dung to the thickness of four or five inches, *beat* all over well again; and so on, till the work be finished. But *mind:* you must be very careful to keep the *edges* of the bed *well beaten;* or else they will be more *hollow*, and will *sink more*, than the rest, and then the earth on the bed will crack in the middle. Beat them well; keep them *well up* as you proceed; beat well the *sides* of the bed, as it goes on rising. Comb the sides frequently down with the tines of the fork. And, in short, make the sides upright, and smooth and neat as a wall. As you proceed, measure the *height* frequently, in the different parts of the bed, to see that you are keeping the height every where the same. At last, shovel and sweep up all the short earthy stuff round the bed and where your dung-heap was, and lay it very smoothly on the top of the bed; and make all as smooth and as level as a die with the back of your shovel.

75. Thus the *bed is made*. Then put on the Frame, and fix it nicely. Then put the Lights upon the Frame. If you finish your bed by noon, the *heat will* begin to rise by the next morning; and by the noon of the second day after the bed is made, the heat will be up. Poke your finger as deep as you can into the middle of the bed, when you have taken off one of the Lights. If the heat be so great as to *burn* your finger; that is to say, if you cannot *endure* the heat; then it is too great to receive the earth; but, if not, *put on the earth* all over the bed. If the heat be too great, give the bed a little *air* and wait till a little of the heat be gone off.

76. The earth should be *dry;* not like *dust;* but not *wet*. I made provision for my bed, by putting earth in my *cellar*, in November. It is not much that is wanted. The bed is to be covered all over, about *six inches deep*. When the earth has been on twenty four hours, take off the lights, and stir the earth well with your *hands;* for *hands* are the only tools used in a hot-bed. When you have stirred the earth well, and made it *level* and smooth, you may *sow your seed*, if you do not find the earth too hot. But, observe, the earth is to be *level*, and *not sloping*, like the glass. The glas is sloping to meet the *sun*, and to turn off the *wet;* but, the earth must lie perfectly level; and this, you will observe, is a very great point.

77. Next comes *the act of sowing*. The more *handsomely* this is done, the *better* it is done. A handsome dress is *better* than an ugly one, not because it is warmer, or cooler, but because, liking it better, being more pleased with it, we *take more care of it*. Those who have seen two or three women together, crossing dirty streets, or in danger from horses or carriages, where the volunteer assistance of men became useful; those philosophers, who have been spectators of scenes like this, cannot have failed to discover, that humanity, like smoke, is very apt to fly to the fairest; and I much question whether Nicodemus Broadbrim himself, if he saw a pretty girl and an ugly one stuck in the mud, would not give his hand to the former. He would hand them *both* out to a certainty; but, he would extricate the pretty one *first*. There is a great deal in the *look* of our gardens and fields; and, surely, in so diminutive a concern as a hot-bed, all ought to be neat and regular. Seeds are great *tell-tales;* for, when they come up, we discover all the carelessness that may have prevailed at the sowing of them.

78. When you have taken off all the lights, make little drills with your finger, from the back of the bed to the front, *half an inch deep* and about *an inch a-part*. Make them equi-distant, parallel, and straight. Then drop in your *Cabbage* seeds along the drills, very thin; but, *twenty* seeds, perhaps in an inch; for, some will not grow, and some may be pulled up when they appear. It is better to have *rather* too many than too few. When you have dropped in your seeds all over the bed, and distinguished the several sorts of Cabbages by names, or numbers, written on a bit of paper, and put into the cleft of a little stick, stuck in the ground; then cover all the seeds over neatly and smoothly. Put on the lights; and look upon your spring work as happily begun.

79. But now we come to the *management* of a hot-bed. And, observe, that the main principle is, *always to give as much air as the plants will endure*. I have always observed, that the great and prevalent error is an *endeavour to obtain, by exclusion of air*, something to make up for *the want of bottom heat*. It is not thus that nature operates. She gives the *air* as well as the heat; and, without the former she gives nothing. I suppose the hot-bed, made as above, to be about *four feet high*, when just finished. It will sink as it heats; and will, at last, come to about a *foot and a half*. Its heat will gradually diminish; but, it will give a great heat for about six weeks; and *some* heat for *four months*. It is this *bottom* heat that makes things *grow*. The *sun* is often hot in May; but, it is not till the *earth* is warm that vegetation advances with rapidity.

80. Having secured the *bottom* heat, make free with the *air*. Even before the seeds begin to appear, give air to the bed every day, unless

it be *very cold weather indeed.* The usual way of giving air is by bits of thick board, cut in the shape of a triangle, or rather, like a *wedge*, broad at one end, and coming to a point at the other. Each light is lifted up, either at back or front of the frame, as the wind may be, and the wedge, or *tilter*, as it is called, is put in, to hold the light up. But, if more air be wanted, the lights may be shoved up, or down; and, in a fine day, actually taken off.

81. When the plants come up, they will soon tell you all about *air;* for, if they have not enough, they will *draw up* long-legged, and will have small seed leaves, and, indeed, if too much deprived of air, will drop down and die. Take care in time to prevent this. Let them grow *strong* rather than *tall. Short* stems, *broad seed leaves*, very *green;* these are the signs of good plants and proper management.

82. It will be necessary to *water.* Take off a light at a time, and water with a watering pot that does not pour out heavily. Water just about sun-set; and then shut down the lights; and the heat will then rise; and make the plants grow prodigiously.

83. As soon as the plants are *fairly up*, thin them, leaving *four in an inch;* and stir the ground about, at the same time with your finger. This will leave in the frame from *twenty-five* to *thirty thousand plants.* If you want less, sow in wider rows and thinner in the row. But, above *all things*, give air enough. Do not attempt to make the plants *grow fast.* You are sure to destroy them, if you make this attempt. Have patience. The plants will be ready soon enough. Get them *strong* and *green;* and, to do this, you must give them *plenty of air.* Remember, that, out of a thousand failures in hot-bed culture, nine hundred and ninety-nine arise from the giving of *too little air.*

84. Before I proceed to the time of taking the plants out of the bed, I must make a remark or two respecting *shelter* for hot-beds; and this leads me back to the *Plan of the Garden.* In that plan (page 307) is the *Hot-bed Ground*, No. 1, which is 70 feet by 36. The fence to the North and West is the *hedge*, and that to the South and East ought to be made of *Broom Corn Stalks*, in this manner: Put some Locust-Posts along at eight or ten feet apart. Let these posts be ten feet high and squared to three inches by three inches. Lay a bed of bricks, or smooth stones, along the ground from post to post, and let this bed be about seven or eight inches wide. This bed is for the bottoms of the Broom-Corn Stalks to stand on. Go on one side of the row of posts, and nail three rows of strips, or laths (best of Locust,) to the posts. The first row at a foot and a half from the ground; the second row at six feet from the ground; and the third row within six inches of the top of the posts. Then do the same on the other side of the posts. Thus you will have a space of three inches wide, all the way along, between these opposite rows of strips. Then take fine, long, straight Broom-Corn Stalks, and fill up this space with them full and tight, putting them, of course, bottoms downwards, and placing these bottoms upon the bricks. When the whole is nicely filled, strain a line from top of post to top of post, and according to that line, cut off the tops of the Broom-Corn Stalks; and, while the fence will look very handsome, it will be *a shelter* much more effectual than pales or a wall; and, in my opinion will last as long as the former, unless the former be made wholly of Locust. Stalks, rushes, reeds, straw, twigs, bows, any thing of this kind, formed into a fence, or put up as shelter, is preferable to any thing *smooth* and *solid.* Grass will shoot earlier under a *bush*, than under a wall, or even a house. A wall will not save your ears from the sharp winds so effectually as even a thin hedge. The American farmer knows well the warmth that walls of Corn-Stalks afford.

85. However, it is not to be presumed, that a *Hot-Bed Ground* will be made by every farmer; and, therefore, before I proceed further with my instructions about it, let me proceed upon the supposition, that the aforementioned bed is made in some *open place.* In this case it will be necessary to use some precautions as to *shelter.*

86. While the dung is *working*, before it be made into the bed, it must, in case of *very sharp frost*, be *covered*, especially on the North and North West sides. If it be not, it will freeze on these sides, and, of course, it will not ferment. However, this is no troublesome job; you have only to throw on a parcel of straw, or stalks; and take them off again, when the frost relaxes. When the bed is *made*, this is what I did. I drove some stakes down, four feet distant from the bed, opposite the North Side and the West End. I tacked a pole from stake to stake; and then I placed up along against this pole, three or four rows of sheaves of tall Corn-Stalks. This sheltered the bed from the North West winds, and prevented it from freezing on that quarter. Some sheaves might, besides, if necessary, be laid against the bed itself. But, observe, you must be able to get at the Lights constantly to give air, and to see how things go on; and, therefore, it is better to have your shelter at some feet distance from the bed.

87. We now return to the bed and the plants. I suppose the seed to have been sown on the tenth of March (*Long Island*, mind,) and that you have been very attentive to give *air* and *water.* By the 10th of April, the plants will have *eight leaves*, and they will form one solid patch of green. They will be a little *drawn up*, though you have given them plenty of air And now they must be removed into a new bed. Dig out the ground a foot deep, four feet wide, and to as great a length as is required by your number of plants. Fill this hollow up with the best dung you have, cover it over with four inches of good earth; and plant your plants upon it in rows four inches a-part, and two inches a-part in the row. When you have put out the plants, water them lightly; and *shade* them for two or three days from the sun. They must also be sheltered *every night*, in this manner. Take some rods, put one end of each rod into the ground on one side of the bed, and the other end on the other side; put these rods at about two feet asunder all along the bed; then tie some rods long ways to these arched rods; so that, when you have done, your bed has an *arch* over it formed by these rods. Every evening about sun-set, cover this arch with mats, with old carpets, or with a slight covering of any sort, which take off again at sun-rise in the morning.

88. To put out *all* your plants in this way will require a *very* long bed, or many short ones. If, therefore, your number of plants be very large, the best way will be to put out a part of them in this way, leave the remainder in the hot bed a week longer (taking off the lights in the day time,) and then to plant all the remainder out in beds of fine rich earth, in the natural ground, and without any covering.

89. Now, here we drop, for the present, the subject of *Cabbage Plants;* because I am to speak of their culture, under the word, *Cabbage*, in that part of the work, which will treat of the cultivation of vegetables. I am, in this part of my work, to confine myself to the *making and managing of Hot-beds;* and, I have selected the *Cabbage Plant*, as a subject for explaining my meaning, because I think that the raising of that plant is one of the most useful purposes, to which a hot-bed can be applied in America.

90. But, a Hot-Bed may be applied to many other purposes. *Lettuces* may be raised in it. Pepper-grass, Raddishes, young Onions, may be raised. Parsley-roots may be put in, and fine parsley obtained in March. Asparagus may be raised in this way. It is not worth while to attempt to bring Cucumbers and Melons to *fruit* in a hot-bed: but the *plants* may be raised there, and afterwards put out in the ground with great advantage in point of *time.* Several sorts of annual *flowers* and of *Green-house* plants may be got forward by a hot-bed, which, without it, can hardly be got at all to any great degree of perfection. Of the management of these sorts of plants in a hot-bed I shall speak under their several *names;* but on the management of hot-beds, there yet remain to be made some observations, which have a general application.

91. As to *heat* and *air* it will demand but little attention to manage well. But a little *Thermometer*, hung up, or laid down, in the bed, will be of use. The heat should not exceed *seventy-five* degrees in the day time, and *sixty* at night. If it come down to fifty at night it is better. If you cannot keep it down to sixty without giving a little *air* at night, give it, by putting something under a light, or two lights, to let in a little of the cold. For, always bear in mind, that, when plants, of whatever kind, be *drawn up*, they are nearly spoiled.

92. When the *Sun* comes upon the glass, it soon augments the heat; and the air must be given immediately if possible, so as to keep down the heat. Changes are very sudden in March, April and May; and, therefore, *somebody* should always be at hand to attend to the hot-bed. But, if the master be from home, there is, surely, some man; or, at any rate, a wife, a son, or a daughter. The labour is nothing, the trouble very little indeed, and all that is wanted is a small portion of *care.*

93. It may happen that the bed will get *too cool.* It may loose its heat *sooner* than you could wish, especially if you use it for Cucumber and Melon-plants after you have used it for things that you want earlier; and, I shall show, that this may be very *useful* in certain cases. Now, if the heat be too much diminished, you may easily restore it, thus: make a little narrow hot-bed, a *foot and a half wide*, all round the bed. Put the dung together as before; place it close to the bed; beat it well; and build it up, all round, as high as the *top of the Frame.* This is called *lining;* and it will give the bed nearly as much heat as it had at first. If you do not want so much heat, line only the *back* of the bed; or the back and the *two ends.* In short, take as much heat as you may want.

94. Before I dismiss the subject of hot beds, I must notice, that there are other contrivances than *frames* resorted to in this kind of garden work. A *frame* is, as we here see, a wooden construction, for *lights* of glass to be placed on. For smaller concerns there are very convenient things, called *hand-lights* or *hand-glasses.* A hand-glass is a square *glass-house in miniature.* Its sides are about eight inches high from the ground to the eves. The roof rises from each side in a triangular form, so that it comes to a point at the top, as a pyramid does, the base of which is a square. At this point is a *stout ring*, to lift the hand-glass about by. The panes of glass are fixed in *lead;* and the rim round the bottom is made of iron or of wood. Any glazier can make these hand-lights, and they are by no means expensive. Here, where the tax

upon glass is so slight, they cannot be more expensive than in England; and there they do not cost much more than a dollar each. They may be made of almost any size. About 18 inches square at the base is a very good size. In the gardens near London there are acres of ground covered with such glasses. It is the custom there to plant out cauliflowers in the fall, and to cover them, in severe weather, during winter, with hand-glasses. A hand-glass may, in April, be put over a hot-bed made with a *wheel-barrow full of dung*. It would bring on cabbage plants enough for two or three *gardens*. It is handy to sow things under in the *natural ground*, in the spring, especially flowers that are to be transplanted; for, on the natural ground, it adds to the heat in the day, and keeps off cold and slight frost in the night. Air is given, by putting a brick, or bit of wood, under one of the sides of the hand-glass.

95. Now, look back at the *Plan* of the garden. No. 1, is the Hot bed Ground. It is seventy feet long and thirty-six wide. It is wide enough to contain four rows of hot-beds, with room for linings. But, though a tenth part of this should not be wanted, the place is *a warm place*, and is better for tender things than a colder place. The entrance to it from the Western door of the garden is convenient for the carrying in of dung, and for carrying it out again for the use of the garden.

96. Here would be room for a great deal more beds, certainly, than can ever be wanted even in a gentleman's garden. But, observe, the room is no evil. Whatever is not used for hot-beds may be applied to other purposes. This is a *sheltered* spot; and, it will, by and by be seen, that, even if not used for hot-beds at all; such a spot must be of great utility.

(To be Continued.)

AGRICULTURE.

Dear Sir, December 8th, 1822.

I am directed by the Delegation of the united Agricultural Societies of Va. to request that the six pieces now sent you, may be published in the American Farmer.

Respectfully yours' &c.
EDMUND RUFFIN Sec'y.

To John S. Skinner.

PAPERS DIRECTED TO BE PUBLISHED BY THE DELEGATION OF THE UNITED AGRICULTURAL SOCIETIES OF VIRGINIA, AT THEIR MEETING HELD IN THE TOWN OF PETERSBURG, ON WEDNESDAY THE 7TH INSTANT.

No. I.

A Communication from Dr. WILLIAM J. COCKE, *read before the Agricultural Society of Sussex, on the 14th of May*, 1822.

Wishing to elicit from others information on the following subjects, I am induced to offer for the consideration of the Society the following crude observations on, THE PROPER TEMPERATURE OF SOILS: THE COMPARATIVE ADVANTAGES OF GREEN OR DRY VEGETABLE MATTER PLOUGHED INTO LAND, AND THE APPLICATION OF ALL OTHER VEGETABLE AND ANIMAL MANURES.

Proper Temperature of Soils.

As far as my limited researches into the Science of Agriculture have extended, I have not been able to find a single instance in which, the proper temperature of Soils has been the particular subject of any essay—nor has the subject excited that degree of attention which in my humble opinion it eminently deserves.—It is universally agreed, that a portion of heat is essential to the melioration of all soils, and the growth of every vegetable; but what that degree is, has not yet been ascertained.

The estimated temperature of the Earth is about 48 degrees of Fahrenheit's Thermometer, but as the three kinds of Earth, Silicious, Calcareous, and Aluminous, which are considered necessary to the formation of perfect soil, differ materially in their powers of conducting the principle of heat, (or Caloric,) we may rationally infer, that wherever the composition of the soils is considerably altered in relation to the three kinds of Earths, that the temperature is likewise materially affected. The first of these earths is a rapid conductor of heat, the second is moderately so, and the third a very bad conductor; and their affinities for moisture seem inversely with their powers of conducting heat. From this circumstance we may conclude that neither of the three can be left out of a soil without injuring its aptitude to the retention of a due degree of heat and moisture.

Thus we find that wherever sand very much predominates in a soil, its temperature becomes so high and its affinity for moisture so small, that it dissipates all other matters necessary for the growth of plants.—Wherever calcareous earth predominates to excess, in a finely divided state, (from its power of being dissolved by water, and its antisceptic powers,*) it becomes so hard as to resist the roots of vegetables, consequently this is the most useless of all soils. Again: a soil in which clay predominates to excess becomes so cold and moist that vegetable matter ploughed into it remains so long without fermenting, as to be nearly useless to the succeeding crop. To this it may be said, that a soil composed properly of sand and clay, would remove the above objections. True: but these two earths have no chemical action on any thing which comes in contact with them. The different acids formed in the process of fermentation are left free in the soil and act manifestly to the disadvantage of all vegetables fit for the consumption of man or animals. Water is likewise a very bad conductor of heat, so much so, that a soil retaining an undue quantity, becomes cold and sterile.

Dry or Green Vegetable Matter Ploughed into Land.

But few subjects deserve more extensively the attention of Farmers than this, particularly in this part of the country, where we are compelled to depend principally on the spontaneous production of the soil for the nourishment of the future crops; and there is no subject treated of, in the books on Agriculture, which I have had an opportunity of reading, on which there is a greater contrariety of opinion. From the pen of Col. John Taylor, who may be justly considered the father of Agriculture in this state, we find the following remarks. Arator, pages 88 and 89. No. 18.

"Wood and all the vegetables of softer texture, are exposed to the effects of putrefaction "and evaporation, in a degree so far below the "water, that a complete dressing of atmospheric"al manure conveyed in the vegetable vehicle, "will discover its benefit for years, whilst one "conveyed in rain will disappear in a few weeks. "It follows that the nearer the vegetable vehicle "of manure from the atmosphere, approaches "to wood, the longer it will last, and that the "nearer it approaches to water the shorter it "will last. If this principle is sound, a point of "great importance to the enclosing system is "settled: whether it is better to plough in vegetables in a succulent or dry state? Every experiment I have ever made, decides in favour "of the latter; and these decisions correspond "with the requisition of our theory."

The foregoing extract from Arator, conveys, very pointedly, the opinion, that the more putrefaction and evaporation can be retained in the soil, the greater will be the advantage gained by the application of vegetable matter.

Just the reverse of this opinion, we find from the pen of Judge Peters, as expressed in the second volume of the Memoirs of the Philadelphia Agricultural Society, and the opinion of the application of green vegetable matter and quick fermentation strongly incúlcated, as the best mode for the melioration of the soil.

In the Elements of Agricultural Chemistry, by Sir Humphrey Davy, we find the following observations. p. 249. "When green crops are to be "employed for enriching a soil they should be "ploughed in, if it be possible, when in flower or "at the time the flower is beginning to appear, "for it is, at this period, that they contain the "largest quantity of soluble matter, and that their "leaves are most active in forming nutritive "matter."

Again in Sir John Sinclair's code of Agriculture, Appendix, page 374. "When manure is deficient, the ploughing in a green crop of peas, of Buck-Wheat, &c. has often been resorted to: but this practice is not found to answer. Buck-Wheat was ploughed in for several years in Lincolnshire as a manure but ultimately given up, as doing no good."

This sentence is immediately followed by a note by the American Editor. "Very different "is the result of practice in this country. The "superior condition of much of the old tillage "land of Pennsylvania may be fairly attributed "to turning in green Crops of Clover and Buck"Wheat."

In the foregoing extracts we find evidence on both sides of this important question which leaves the farmer, who reads for his improvement, at a loss to which side to give credence; nor can his own experience settle the question, until he has fairly experimented on every variety of soil that comes under his management, without having reference to the principles heretofore laid down.

Vegetable matter (other circumstances being favourable) will commence fermentation at the temperature of 55 degrees of Fahrenheit's Thermometer, and the disposition to fermentation increases with increased temperature until the temperature arises to 90 degrees. Sixty-seven and a half is the middle of these two extremes; which we will take as the standard degree at which fermentation would go on to the greatest advantage in the soil.

Should this and the foregoing propositions be true, we may conclude, that whenever the temperature of the soil rises above the standard (or 67½ degrees) it will be necessary to plough the vegetable matter into the land in that state, (dry,) best calculated to resist fermentation, and whenever it falls below the standard temperature, it will be best to plough it in, in that state (green) which is best calculated to promote fermentation. This brings us to the conclusion, that all the opinions heretofore quoted are correct as far as they were governed by the particular soils and circumstances under which they were formed: but incorrect in a general point of view, as a standard from which a farmer should draw his opinions for the management of his farm.

In the Spring of 1819, I subjected these opinions to the test of one experiment—on two pieces of land about equally fertile, but one a warm light soil, and the other a close cold adhesive soil: on each of these a quantity of dry vegetables was put, under circumstances as nearly equal as I could make them, and they were both tended in corn in the same way. The corn on the light land was immediately benefitted and continued to improve throughout the year, whilst that on the other received no apparent benefit, nor has the land of the last been benefitted on a ratio half equal to the first.

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* *This power seems to be reversed when the quantity does not exceed* 15 *or* 20 *per cent.*

On the application of all other Vegetable and Animal Manures.

I will introduce this subject by another quotation from the pen of Sir H. Davy, p. 6, “There “has been no question on which more difference “of opinion has existed, than that of the state “in which manure ought to be ploughed into “land, whether recent or when it has gone “through the process of fermentation, and this “question is still a subject of discussion; but “whoever will refer to the simplest principles of “chemistry, cannot entertain a doubt on the subject. “As soon as dung begins to decompose, it “throws off its volatile parts, which are the “most valuable and the most efficient.—Dung “which has fermented, so as to become a mere “soft cohesive mass, has generally lost from one “third to one half of its most useful constituent “elements: it evidently should be applied as “soon as fermentation begins, that it may exert “its full action upon the plant, and lose none of “its nutritive powers.”

This sentence would have been sufficient of itself, to point out the proper time at which manure, composed of animal and vegetable matter should be applied, and no doubt there would have been a greater unanimity of opinion on this subject, was there not some other circumstance affecting it, than its particular state of fermentation at the time of its application. This circumstance I conceive to be the temperature of the soil, nature's great laboratory, and it is to this we may attribute the great diversity of opinion on this otherwise simple subject. But however diversified this opinion may be, we can discover a beautiful concatenation of idea in the several authors on Agriculture. Thus wherever one recommends the use of green vegetable matter, he will likewise recommend the use of well rotted manure, and where one recommends the use of dry vegetable matter he will advise undigested manure.

This is extensively shown in the writings of Judge Peters, and Col. John Taylor, the first recommending green vegetable matter and well rotted manure, with other means of promoting decomposition, such as lime, burning, &c. which shews that it is necessary to encourage decomposition on his soil: whilst on the other hand, Col. Taylor recommends dry vegetable matter, and undigested manure, shewing that the land on which he operates has the power of rotting whatever is ploughed into it to excess, which renders it necessary to make use of such applications as are best calculated to resist fermentation and evaporation.

The foregoing observations are respectfully submitted to the consideration of the Society, under the hope that some member more competent will improve upon them, by

WILLIAM J. COCKE.

* * *

Improved short horn—and Herefordshire breed of Cattle—*their relative merits.*

A correspondent has given us to understand that he thinks we are giving too much space to discussions as to the relative merits of cattle of different races—is it so? We desire to conform to the general wish; but we believe that the subject of Live Stock and its improvement in this country is every day rising into greater importance, and that the intrinsic merit of the question, warrants our continued attention to it, until it shall have been fully developed in all its views—if wrong, it is equally our duty and inclination to succumb to the general feelings of our patrons.

In the last Farmer a letter was inserted from a late number of the London Farmer's Journal on the comparative qualities and merits of the “Improved Short Horn” and “Herefordshire” cattle—which went to declare and establish a preference of the former. A subsequent arrival brings that Journal of a later date, and puts into our hands a *reply* to the communicaiton just referred to—It seems but fair to *hear* both sides: *audi alteram partem*, is a maxim as sound, if not as old, as the principle of Justice it inculcates. Moreover, we have these identical breeds now in our country, in the hands of Williams and Jacques in Massachussetts—Powell in Pennsylvania—Lloyd in Maryland and Clay in Kentucky. Their offspring will soon be for sale, and it is but fair that before the publick make investments of their capital in this way, they should be enabled as far as is practicable by inquiry and discussion, to decide correctly. For these cattle *high prices* must and ought to be paid, unless their owners are expected to undervalue the objects of their own enterprise and publick spirit.

Edit. Am. Farmer.

ON MR. RHODES'S LETTER.

Lynch Court, near Leominster,
Oct. 12, 1822.

Sir,

I never remember to have read any thing in your Journal that created so much astonishment as the letter of Mr. Rhodes, in your last paper. From the tenour of that epistle, any one would be led to suppose that he was a first-rate judge of stock; that he had travelled many miles had given up much time, and bestowed great pains in the investigation of the peculiar qualities of the two celebrated breeds, which he wished to compare, and above all, that it was his own unbiassed opinion which he gave. Now I challenge Mr. Rhodes to deny, that the comments he has made on both breeds were furnished by Mr. Whitaker, who accompanied him on both tours. This deception on the public is what I object to, and the only reason that induced me to reply to his letter. Mr. Rhodes speaks so decidedly in the first person, without ever naming his companion, that the public must conclude it was his own opinion which he gave. He says “*I have* a long time had an anxious wish to examine the question,” &c. “*I last year made a tour into the North*, and am now returned from a similar journey of five hundred miles in Herefordshire,” &c. “Nothing short of a *personal* examination,” &c. He adds, “If *I* have given it (that is, his opinion) with impartiality, it will, I hope, receive candid attention.” I think, Sir, I may venture to affirm, that the impression left on the mind of any man who reads this letter must be, that he had made himself acquainted with the opinion of a gentleman, who had turned the powers of his highly cultivated mind to the investigation of an important question with patience, with zeal, and, above all, with impartiality. What must be his astonishment on learning, that instead of this being the case, he had been reading the opinion of a Yorkshire Farmer, who is a great breeder of Short-horns, and who has a sale of Short-horned stock advertised in the same paper as this letter appeared in, and to which it forms a very pretty puff! If I thought it necessary, I could easily shew that the opinion given of the Herefords is erroneous, and that all the good qualities ascribed to the Short horns, are possessed in a more eminent degree by the Hereford cattle, especially as to quality of meat: perhaps, the Hereford may not be so large or so fat as a yearling, but ever after he will be superior; and as that is an age at which no beast is killed, I see no advantage in it. Mr. Rhodes says, that Herefords do not acquire so great a stature, or lay on flesh so fast as the Short-horns. As proof is better than assertion, I hereby challenge Mr. Rhodes to shew a Short-horned cow, from any part of England, against a Hereford out of my own stock, that laid abroad last winter, and eat nothing but straw till the latter end of February, in hopes of getting her to stand to the bull. The cows to be slaughtered on the 1st of March; the heaviest cows to be the winner, for fifty guineas, provided the cow shewn by Mr. Rhodes is as old as mine (14 years); and that the acceptance of this challenge is announced to me within one week after this letter appears in your Journal; and that the cow has not been more than one year feeding. There is another point in this gentleman's letter, which is also calculated to make an erroneous impression. Where he says, he is just returned from a tour of 500 miles in Herefordshire and the adjoining counties, for the purpose of examining the cattle of the Herefordshire breed, one is naturally led to suppose that he passed a considerable time in that county; however, I believe the fact to be, that he spent but *one day* in the investigation of their merits, with the exception of an evening at my house. Mr. Rhodes wrote to say, that he and Mr. Whittaker would come to me on a certain day; at the time appointed, Mr. R. arrived alone, (Mr. Whittaker having made an engagement elsewhere); he arrived about dinner time: in the evening we walked out about an hour and a half, during which time I shewed him above a hundred beasts. I do not recollect that he touched more, than one or two, saying, he knew but little of the matter himself, and that he relied entirely on the judgment of Mr. Whittaker, in whose company he would visit me again, when they would notice the different animals more particularly: however, I saw him no more, as I understood they sacrificed the express object of their journey to paying a visit of a few days to some friends or relatives of Mr. Whittaker, who happened to be at Cheltenham; in their return from which place, they in *one day* made a very rapid survey of several gentlemen's stocks, which Mr. Rhodes seems to think was sufficient to enable him to make a “careful examination,” and to decide on the comparative merits of these rival breeds. With respect to the observations on the peculiar properties of the Hereford cattle, I shall make but one remark, which I think will be sufficient to shew that the hasty view these gentlemen took of them could not enable them to decide accurately. Mr. R. says, at the conclusion of his remarks, “The hair of all was very short.” I should like to know how it could be otherwise in the middle of June! I feel satisfied that Mr. Rhodes had no intention to impose on the public, and that he will readily acknowledge the truth of what I have here stated, as I believe him to be too honourable to take any improper advantage, or to make any unfair statement intentionally; and I am quite at a loss to conceive how he has been led into his present error. I trust he will excuse the liberty I have taken in commenting thus freely on his letter, but as many others are interested in the discussion besides myself, I could not let it pass unnoticed.

I remain, Sir, your humble Serv't,
J. R. SMYTHIES.

* * *

FROM THE ALBANY ARGUS.

Bread.—The following important improvement in the composition of bread, the essential staff of life, deserves the attention of the community.—It has lately been introduced into a respectable family in this city, and is pronounced superior to any other Whoever makes the experiment, will never afterwards use bakers' bread when this kind can be had. Independent of a great saving, the bread is spungy, light, and remarkably sweet. The expense of baking is nothing to those who use cooking stoves.

1st. Take equal quantities of mealy potatoes and superfine flour.

2d. Peal and boil the potatoes, using the same water to mash them in; which should be done as fine as flour.

3d. Add, (for three common loaves,) a table spoon full of fine salt, and sufficient yeast.

4th. Mix the bread, and let it rise; bake it about one hour gradually.

LARGE CATTLE.

The New-Haven Register of Saturday mentions, that a few days previously, three oxen passed through that city, on their way to New York, which weighed, according to the patent scales of L. Bishop, Esq. as follows, to wit—3080—2570—2546. These oxen were raised and fattened by Col. Chapin, of Springfield, Mass.—Those cattle, we are this morning informed, have arrived in this city, and will be exhibited a few days, commencing to-morrow, at the building in Broadway, near the intersection of Pearl street. We are informed that a year or two ago Col. Chapin sold a pair of oxen in Boston for $1050, neither of which weighed as much as the largest of the first mentioned oxen. It remains to be seen whether the New-Yorkers will be as liberal as the Bostonians. About ten days since, the n ate of the largest of these three oxen died, and more than 300 pounds of rough tallow was taken out of him, exclusive of the kidney tallow.—*New York paper.*

IMPORTANT INVENTION.

A gentleman of this state, to whom this country is much indebted for his former inventions, has lately completed a machine for *cutting fur from skins*, without injury to the Pelt, which has heretofore been rendered useless for *leather*. It is also ascertained, that this machine will shear cloth much better than any machine now in use. One man can cut, with this machine, the fur from 1000 skins per day, or shear 2500 yards of cloth—whereas the cutting of the fur from 50 skins or shearing 150 yards of cloth, is considered a day's work, by the present mode of cutting and shearing. Thus there is a saving of 19-20ths of the labour—the fur cut by this machine, is pronounced, by good judges, to be better than that cut in the usual way. Considering the great saving of skins, (particularly the seal,) and labour, we must pronounce it one of the most important inventions which has honored our country.

Boston Palladium.

Power of the Horse.—The couriers of Russia travel from Petersburgh to Tobolsk, a distance of 19 deg. 26 min. in twelve days. Their rate of travelling is of course about one hundred miles a day. What, in equestrian phrase, is called a great mover, will, without pressing, trot 640 yards in eighty seconds.

New England Farmer.

Feeding Cows with Cubbages.—When cabbages are given to milch cows, the decayed and musty leaves must be taken off, or they will impart a bad taste to the milk and butter.—*Ib.*

Varnish for Iron or Steel.—The Nantucket Inquirer states that "A permanent varnish is obtained by rubbing iron in a state nearly red hot, with the horny hoofs of cattle, which are previously dipped in a small portion of oil; this process is asserted to afford the best defence from the destructive influence of air and humidity.—*Ibid.*

FROM THE LONDON FARMER'S JOURNAL.

ON PREPARING SEED WHEAT.

Close House, County of Durham,
Sept. 29, 1822.

SIR,

I beg to inform your agricultural readers, that I have a second time tried an experiment in preparing wheat for seed, and now wish that the result may, through the medium of your valuable paper, be generally known, as it has been attended with considerable benefit. Instead of stale urine, I used whale oil, and afterwards dredged it well (as usual) with slacked lime: three gallons is quite sufficient for a quarter, and may be laid on best from the gardener's watering pan. The seed ought to be well stirred both before and after liming. The expense is trifling, and I am certain will be attended with the most beneficial results. The seed is enriched thereby, and nourished, and that too in a more certain way than by manure, and at the same time less expensive. The ear is stouter (as may be found on comparison,) the crop more abundant, and every way superior. I am, Sir, your obedient servant,

JOSEPH FAIRBURN.

A FILLY SUCKLED BY HER GRAND-DAM EIGHT YEARS AFTER HAVING HAD HER LAST FOAL.

Pleasant Plains, near Annapolis,
August 24th, 1821.

J. S. SKINNER, ESQ.

Dear Sir,—I have taken the liberty to inform you of a remarkable circumstance, which happened at my Farm, near Annapolis. On the 30th of April, I had a fine promising Filly foaled, seven weeks after, the mother died; I then thought best to put the filly in a small lot, with the intention to raise her by hand, but finding her rather lonesome, I put a horse in with her to be company; having use for the Horse, I took him out, and then put a Mare in his place; in the course of two days, my servant came to me, and said, that the Mare had milk, and the Filly had been sucking. I went immediately with him to the lot, and to convince myself of the fact, I made him milk her before I left him, as I was a little doubtful of his word. The Mare is now raising the Filly and gives a quantity of milk.——To the best of my knowledge, it has been eight years ago since she had a foal, and the last one was the mother of the Filly which she is now raising. If you think proper to give the above a place in your paper, for the benefit of farmers and those that are inclined to raise their own Horses, you will much oblige

Your Respectful,
Humble Servant,
JOHN A. GRAMMER.

DOMESTIC LOVE.

Domestic Love! not in proud palace halls,
Is often seen thy beauty to abide;
Thy dwelling is in lowly cottage walls,
That in the thickets of the woodbine hide;
With hum of bees around, and from the side
Of woody hills some little bubbling spring,
Shining along thro' banks with harebells dyed;
And many a bird to warble on the wing,
When Morn her saffron robe o'er heaven and earth
doth fling.

O! love of loves!—to thy white hand is given
Of earthly happiness the golden key!
Thine are the joyous hours of winter's Even,
When the babes cling around their father's
knee;
And thine the voice, that on the midnight sea
Melts the rude mariner with thoughts of home,
Peopling the gloom with all he longs to see.
Spirit! I've built a shrine; and thou hast come,
And on its altar closed—for ever closed thy
plume!

THE FARMER.

BALTIMORE, FRIDAY, DECEMBER 27, 1822.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $7 25—Howard st. Superfine, $6 87½—Wharf, do. 6 12½—Wheat, white, $1 35 to 1 38—Red do., $1 27 to 1 30—Rye, 70 to 72 cents—Corn, 60 to 63 cts.—Oats, 35 to 37½ cents—Beef, live cattle, $5 to $5 50 per cwt.—Beef, 8 cents per lb.—Bacon, round, 10 to 11 cts.—Pork $4 50 to 5 50 per clb.—6 to 8 cts. per lb.—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Clover seed, $9 to 10—Timothy seed, 4½ to $5—Flax seed, 75 to 80 cts.—Whiskey, from the wagons, 32 to 34 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, none in market—Herrings, No. 1, $3 62½ per bbl.—No. 2, $3 37½—Fine salt 80 to 90 cts. per bush.—Coarse, do. 75—Butter, 20 to 25 per lb.—Eggs, 25 cts. per doz.—Turkeys, $1 25—Geese, 28 to 37½ cts.—Chickens, $1 50 per doz.—Straw, $10 per ton—Hay, $17.

Maryland Tobacco—of the fine qualities, none in the market—Good Patuxent, $6 to 8, scarce—Inferior, $2 to 5, plenty and dull—seconds, $1 25 to 5—Very little doing in the market.

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Canton, Stark county, Ohio, Nov. 1822.

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THE AMERICAN GARDENER;

Or a Treatise on the Situation, Soil, Fencing and Laying-Out of Gardens; on the making and Managing of Hot Beds and Green-Houses; and on the Propagation and Cultivation of the several sorts of Vegetables, Herbs, Fruits and Flowers.

(Continued from page 304.)

CHAPTER II. Continued.

ON THE MAKING AND MANAGING GREEN-HOUSES.

97. My object is not to treat of any thing very *expensive* or very *curious.* There are persons, whose taste greatly differs from mine in regard to shrubs and flowers; and I by no means pretend to say that mine is the best. But, I can treat of nothing that I do not *understand*, that is to say, of nothing with regard to which I have not had experience. My study, as to gardening, has always been directed towards things that please the *senses:* in vegetables, things that please the *palate*, and that, to use the common saying, are *good* to *eat:* in shrubs and flowers, things that delight the *sight* or the *smell.* Mere *botanical curiosities*, as they are called, I never took delight in. If the merit of a plant or a flower is not to be discovered without close and somewhat painful examination, it has always appeared to me not worth the looking for. There is, in fact, nothing *more curious* in one plant, or flower, than in another. They are all equally curious; they are equally objects of wonder. There is more of *rareness*, in England, in the Indian Corn than in the Cowslip; but *here*, the Cowslip would have the merit of rareness. The ice-plant, the egg plant, and many others, have *oddity* to recommend them; but, after all, *oddity* is but a poor recommendation. What are thousands of these when compared to a single *rose* bush in bloom!

98. I am rather anticipating here; but, I wished to explain why I do not recommend any very great pains in the affair of a green-house. The *plants* to keep in such a place I will talk of hereafter. At present I am to speak of the *making* and the *managing* of such a place.

99. A green-house is for the purpose of having plants and flowers flourishing, or at least, in verdure and in bloom in *winter.* The best place for a green-house, is, near the dwelling house, and, it should be actually *joined* to the dwelling house, one of the rooms of which should have *windows looking into the* green-house, which latter, however, must face the *South.* When the thing can be thus contrived, it is very pretty. It renders a long winter shorter in appearance; and, in such cases, appearances are realities. A door, opening from a parlour into a green-house, makes the thing very pleasant; and especially in a country like America, where, for six months, every thing like verdure is completely absent from the fields and gardens. And, if the expense be but small, such a pleasure may, surely, be afforded to the females of a family, though, to afford it, may demand some deduction in the expenditure for the *bottle*, in the pleasures of which (if, alas! pleasures they be!) the amiable ladies of this country do not partake.

100. I hope, that no man, who has the means to provide such pleasures for his wife, or daughters, will talk to me about the *uselessness* of a green-house. Of what *use* then is *fine* linen, when coarse is cheaper and will last longer! Of what *use* is beauty in a *horse*, a *house*, or in any thing else? Of what *use* are sporting dogs and guns? The *use* of these things, is, that they *give pleasure;* that they render life pleasanter than it would be without them. And, why not, on the same principle, call a green-house *useful?* Of what *use* is money, that thing which every one seeks to possess? Of what use indeed, but to be expended on things, which tend to make life easy and pleasant? Therefore, a green-house comes fairly within the scope of usefulness; for, from it the females of a family would receive constant amusement and delight, during a season when they are cut off from almost all other recreation.

101. Let me not, however, in using these arguments, be supposed to doubt of the disposition of American husbands to gratify their wives in this respect; for, many and striking as are the traits, that distinguish the American character, none is so striking, and none exalts it so much, as the respect and deference of the male towards the female sex. They talk to us about French *politeness;* and we hear enough of the sentimental trash of romances, where Princes and Nobles are the heroes. But, in no part of this whole world are the women so kindly and so respectfully treated by the men as in America. Here women, in no state of life, are treated badly or churlishly. To insure indulgence, assistance, forbearance, from *every man*, and under any circumstances, it is sufficient that the party is *a woman.* In this respect no country on earth will bear a comparison with America. This is, too, the *natural* bent of the human heart when uncorrupted by vicious courses and underhanded by penury. For, count our real pleasures; count the things that delight us through life; and you will find, that ninety-nine out of every hundred are derived from women. To be the object of *no woman's* care or good wishes is a sentence the most severe that can be pronounced upon man.

102. As to the *erection* of a green-house, carpenters and glaziers are never wanted, and, where Locust wood, for the sills, is every where to be had, and glass with scarcely any tax, how elegant, how cheap, and how durable, may such a thing as a green-house be!

103. In America there must be *heat;* but, how easily will any of the ingenious men in this country find the means of furnishing the necessary heat with hardly any expense or trouble! In most cases the warmth might go from the parlour fire place; for, all that is wanted is *completely to keep out frost.* There is, here, no want of *Sun* even in the coldest weather; and, if the green-house were on the *Eastern* side of the dwelling-house, the cold would not be any great annoyance. But, at any rate, the heat necessary to keep out frost might easily be obtained. A *Thermometer* should be kept in the green-house. The heat should be about *sixty* degrees in the day time, and *forty-five* in the night.

104. In England they need very little fire in their green-houses, except in very cold weather, which, indeed, they seldom have. Their great want is that of *sun;* for, nothing will do well without sun; and America has plenty of this even in the coldest weather. So that, if the frost were *effectually* kept out, that alone would give beautiful plants in winter. By an additional heat, a *growth* and a *bloom* would be constantly kept up; and a green-house might be made one of the most beautiful and most pleasant things in the world.

105. Of the different plants suitable for a green-house, and of the particular treatment of each, I shall speak under the head of Flowers, and shall, in this place, only add some directions as to *management*, which are applicable to the whole assemblage.

106. *Air* is the main thing, after the keeping out of the frost. Air is given by pushing up, or drawing down, the *Lights*, which form the *top* or roof of the green-house. Always give air when there is no fear of frost. Give heat and air at the same time, if the weather be not mild enough to dispense with the heat. For without air, the plants will become sickly. They have *lungs* as well as we; and, though they may *live*, for a while, without air, they will be an eye-sore instead of a delight to the beholder. If the *sides* and *front*, as well as the *top* of the green-house, be of glass, (which is best,) then air may be given there, instead of giving it by pushing up, or pulling down, the lights at *top.*

107. The plants, of whatever sort or size, must be in what the English call *pots*, and what the Americans call *jars.* Perhaps I may as well speak, once for all, about the shape and size, and manner of planting in, these pots. The shape is generally well known; but, the pots ought *never to be glazed.* Plain earthen pots are best as well as cheapest. There must be a hole in the middle of the bottom of every pot, or no plant will *live* in it for any considerable length of time, and will never *grow* in it at all. This hole should be in proportion to the size of the pot; and the pots may be from 4 inches to 18 inches over at top, and from 4 inches to 18 inches deep; being one third less across at bottom than at the top. The smallest hole ought to be of the size of *half a dollar.*

108. Besides the *pot*, there is what the English call *a pan*, for the pot to stand in, which should be about 2 inches deep, and as wide over as the *top* of the pot, and, of course, a third part wider than the bottom of the pot. This pan should be made of the same materials with the pot itself.

109. I have, in paragraph 21, mentioned, incidentally, *wooden boxes*, as things wherein to place plants; but, I must here caution the reader against the practice, wherever it can be avoided, especially for small plants. We see plants, thus cultivated, placed on window sills; and they sometimes grow there pretty well. Orange Trees, Large Myrtles, and other large exotics are planted in *tubs.* There would be great difficulty in getting earthen things of sufficient dimensions for these purposes; besides the constant danger of *breaking.* But, I am quite satisfied, that where earthenware can be got and used, it is greatly preferable to wood; and this opinion is founded on actual experience. In my hot-bed of 1819, I sowed several sorts of seeds in *little wooden boxes.* I had no pots at hand, and to get them from New-York required more time than I was willing to spare. The seeds all *came up;* but, by the time that they were an inch or two high, they *rotted at the stem*, and fell down. There were not less than twenty sorts of seeds; some of culinary vegetables, some of field plants, and some of forest-trees. They all died. In one box there were planted some *geranium-cuttings.* They came out into bud and leaf; but died soon afterwards. I had soon afterwards got some *pots.* I repeated my sowing and planting; all the seeds and plants *grew and flourished.* And, let it be observed, that the boxes stood in the same bed, where cabbages and cauliflowers were sown without either pots or boxes; and that the plants of these grew, and flourished exceedingly. The cause of the plants rotting in the boxes was this; though there were several holes at the bottom of each box, and though these were properly covered with oyster-shells, the wood *itself*, sides as well as bottom, *imbibed* and *retained too long*, part of the water poured on the top, and, as the boxes were plunged into the earth of the bed, they imbibed moisture from the watering of the bed also. There was constantly *stagnant and sour water near the roots of the plants*, and this killed them. These boxes were of *deal.* If *tubs*, or *boxes* must be resorted to, they ought to be of *Locust*, or some other

hard and *close* wood. Locust is best, because *imperishable.* See paragraph, 16.

110. Some care is necessary in sowing and planting in pots. The mould should be good, and made very fine. The first thing is to put an *oyster shell*, or piece of broken earthen ware, into the pot, to *cover the hole at the bottom;* and the *hollow* part of the shell, or other thing, should be *downwards.* The use of this is, to keep the hole *open*, that the water may find its way out of the pot, and not lie stagnant at the bottom, where it would become sour and injure, if not kill, the plant. The earth, if there were no shell, would fill up the hole, and, would, in time, become solid, and thus prevent the water from getting out. The shell, or broken earthen ware, keeps the earth hollow, and the water creeps under the edges of it, and thus escapes into the pan, whence it evaporates. In fields, we always desire an *open under-soil;* and, in a rainy season, you will see the crops stunted and looking yellow, where there is a bottom of *clay*, while, at the very same time, a bottom of sand, gravel, lime stone, or other *open* matter, exhibits them green and flourishing. It is upon this principle, founded on experience, that holes have been made in the bottom of flower-pots. The uses of pans are, first, to prevent the water from running about the places where pots are placed; and next to hold the water up to a level with the roots, in *hot* situations, a little longer than it would otherwise remain up to that level. See paragraph 21.

111. As to the mere operation of sowing, or planting, things in pots, though a simple operation enough, some little attention to method is necessary. Your mould always ought to be *fine*, and even *sifted*, if convenient; for, when the quantity is to be reckoned by *gallons*, the labour cannot be great; and, the desire to possess green-house plants necessarily implies pleasure, rather than pain, in employing the means to obtain them. In order to make myself clearly understood, I shall suppose an instance of *sowing* and one of *planting.*

112. Suppose you have the seeds of *Stocks* to sow. Put earth into the pot enough to fill it to within an inch of the top, and make the top of the earth very *smooth.* Then scatter your seeds upon it, and not too thickly. Then crumble some earth over the seeds to the depth of about half an inch. Make the top very smooth again. Then take the pot in your two hands, and give five or six *gentle taps* with the bottom of the pot *upon the ground*, or upon a *block*, or some *solid* thing. This *settles the earth down;* and it needs no pressing at the top, nor any other thing done to it. After this settling, the top of the earth should be about an inch *lower* than the top of the pot; else you could not, when necessary, give water; for the water would run off, there being no place to hold it.

113. Suppose you have a *Geranium* to plant, which has been raised from a cutting, and the root of which cannot be very large. Put some earth in the pot. Hold the root of plant upon it to see that it will be of the *right depth*, if its root stand on that earth. Then, when you have got the earth to the right height, hold the plant with one hand, and fill up the pot, round the plant, with the other. Then, tap the bottom of the pot on some solid thing, as before mentioned, leaving the earth, as before, an inch *lower* than the top of the pot. Put the pot in the pan; and, in this, case, *water* the plants moderately; for, observe, that a plant in a pot has not an under-soil and dews and a mass of fermenting earth to supply it with moisture, as a plant in the open air has. Yet, even in the case of pots, it is best, unless the plant be of a very juicy nature, to suffer the ground to get *dry at top before you water;* because, water falling upon *freshly-moved earth*, always makes it *bake* hard at top, which is very injurious to every kind of plant.

114. These two instances will suffice for the operation of sowing and planting in pots; for, though some seeds and some plants will be larger, or smaller, than those here mentioned, the principle is the same, and the difference in minute particulars will point itself out. If, for instance, you have stocks, or other little things, to transplant into pots, you will nearly fill the pot with earth, and then make holes with a little stick, or with a finger, to put in the roots; and then proceed as before, and settle down the earth. Such little things, being nearly all juice, will require *water* directly, and shading for a day or two. But, about these matters I shall say more by-and-by, when I come to the *cultivation* of the several sorts of plants and flowers.

115. The *benches* of the green-house remain to be spoken of. They should rise one above another, like the steps of a stairs, that the whole of the plants may share in the benefit bestowed by the sun; but, there may be some on the ground, or floor; and, indeed, the precise arrangement must be left to the taste of the owner. The arrangement ought, however, to be such as to make it convenient to get at every pot; not only for the purpose of watering, but for that of picking off the dead, or dying leaves; for that of stirring the earth frequently round the stems of the plants; and for that of sweeping, and even washing, the benches and the floor. For, let it be observed, that besides the neatness of keeping, due to so choice and elegant a matter as a green-house, cleanliness is greatly conducive to the health of plants in a confined situation. In short, it is *beauty* that is here sought; and, *can* there be beauty without cleanliness?

116. In the month of *June* (Long Island, observe) the plants come out of this their winter abode. How they are then to be disposed of will be treated of hereafter, under the head of flowers; where it will be seen, that the green-house, besides being a most charming object in winter, when all without is dreariness, is the best security for giving you a beautiful garden in summer; and that without a green-house, or, at least, a hot-bed, it is quite impossible to have in perfection, either in America or in England, certain plants and flowers, some of which are the very greatest beauties of the beautiful family of Flora.

117. Nor must we forget some things, with regard to which a green-house would be of great *use*, even according to the most vulgar notions of utility. All sorts of *Herbs* might be potted, and kept green and growing in the green-house during the winter. Some Herbs *dry* well; but, none of them are quite so good as when *green;* and, as to *Parsley*, which is wanted almost every day in the year, it loses all its *virtue* in the drying, smell and all. Six large pots of parsley, the plants taken out of the ground and put in pots in September, and put into the green-house in November, will supply a large family well; and this is no trifling thing, when, for love or money, a sprig of parsley is not to be got for months. A Sage tree, a tree of Rue, one of Rosemary, one of Lavender, a root of Hyssop, Thyme, Penny-royal, some Mint, and, indeed, of every pot and medicinal Herb, that is usually grown in the garden, would be useful, as well as pleasant to the eye, during winter.

118. Even when the plants are out of the green-house, the latter is of *use.* An excellent place for the *drying* of *cherries, apples, pears, quinces, peaches*, and other fruits; and also for the drying of *yeast-cakes*, one of the most useful articles that sensible and provident house-wives ever invented.

119. All this work of drying *can*, indeed, be performed by the help of the fine hot sun, in the *open air;* but then, wet days come; and, sometimes they being compelled to take the things into the house, to place them in a confined space, and in the shade, at best, and away from strong light, greatly injures, and, sometimes, spoils, them; and, at any rate, they must always be taken in at *night* and put out again in the day time. All these are impediments; and all these impediments would be, at once, removed by having a green-house. Once the articles were placed properly in that, the process of drying would be completed without more trouble, and in about half the time required to obtain even an imperfect operation in the open air.

120. For these purposes, too, only on a smaller scale, a *hot-bed frame*, when done with for raising plants for the year, would be useful. The frame and lights might be placed upon *boards*, and the fruits, or cakes, put upon these boards. Being shut in, neither rains nor dews could affect them. They would be dried quicker, more effectually, and with a tenth part of the trouble that attends the drying in the open air.

121. Thus, then, I think, that there is *use*, even in the vulgar sense of the word, as well as ornament, in a geeen-house. But, I must confess, that its value in my eyes, consists in its *moral* effects. It is a source of pleasure to the Mistress of the mansion; to her, who has so strong a claim to attention and indulgence. I will not praise pursuits like these, with Lord Bacon, because, "God Almighty first *planted a garden;*" nor with Cowley, because "a garden is *like Heaven;*" nor with Addison, because "a garden was the habitation of our first parents *before the fall;*" all which is rather far-fetched, and puts one in mind of the grave dispute between the *Gardeners* and *Tailors*, as to the antiquity of their respective callings; the former contending that the *planting* of the garden took place *before* the *sewing* of the fig-leaves together; and, the latter contending, that there was no *gardening* at all, till Adam was expelled and compelled to *work;* but, that the *sewing* was a real and bona fide act of tailoring. This is vulgar work to be sure; it is grovelling; but, who can blame such persons, when they have Lord Bacon to furnish them with a precedent?

122. I like, a great deal better than these writers, Sir William, who so ardently and yet so *rationally* and *unaffectedly* praises the pursuits of gardening, in which he delighted from his youth to his old age. But, I look still further, as to effects. There must be *amusements* in every family. Children observe and follow their parents in almost every thing. How much better, during a long and dreary winter, for daughters, and even sons, to assist, or attend, their mother in a green-house, than to be seated with her at *cards*, or at any other amusement that can be conceived! How much more innocent, more pleasant, more free from temptation to evil, this amusement than *any other!* How much more *instructive* too! "Bend the twig when young:" but, here, there needs no *force;* nay, not even persuasion. The thing is so pleasant in itself; it so naturally meets the wishes; that the taste is fixed at once, and it remains, to the exclusion of cards and dice, to the end of life.

123. This is, with me, far more than sufficient to outweigh even a plausible objection on the score of expense. Such husbands and fathers as are accessible by arguments like these, will need nothing more to induce them to yield to my recommendation: with such as are not, no arguments within the reach of my capacity would be of any avail.

(To be Continued.)

HOP.--HUMULUS.

Introductory to a more particular treatise on the culture of the Hop, we now lay before the reader an extract in regard to that valuable plant, from Philips' "History of cultivated Vegetables"—a very interesting work, from which we shall occasionally make selections. Our patrons are recommended to put such articles in the way of their children. With the Natural History, as well as the Botanical, Medical, Edible, and Chemical qualities of Trees and Plants, and their relation to the Arts, Science, and Commerce, every Farmer's son and daughter ought to be familiar.

Edit. Am. Far.

HOP.—HUMULUS.

Natural order, Scabridæ. A genus of the Diæcia Pentandria class.

"Lo, on auxiliary poles, the hops
Ascending spiral, ranged in meet array."

Phillips' *Cider.*

The generic name of this plant is derived from *humus*, moist earth or ground, because the plant thrives best in such soil, but this word is of modern origin, as in the Greek word *βρύον* and *βρυωνία Bryonia*, Bryony, from the form of the leaves and running of the branches, which somewhat resemble this latter plant. It seems to have been unknown to the ancient Greeks, as it is unnoticed by their authors; and Pliny is the first of the Romans who makes mention of this plant. He calls it *Lupulus Salictarius*, as is supposed, from its climbing upon sallows and other trees.—This author informs us, that the ancients made no use of the flowers, excepting to ornament their gardens; but that the Romans in his time ate the young top as a vegetable, which are, says he, more palatable than nutricious.

Lobel called this plant *Vitis Septentrionalium*, the Vine of the northern regions, because we put hops in our malt drink.

The hop, of which there is but one species discovered, is an indigenous plant of this country, although it is generally stated to have been first brought to this kingdom from the Netherlands, in the year 1524. It is probable that the Dutch gardeners, who came to England in the reign of Henry the Eighth, might have brought over some hop-plants, with other roots and seeds, and that we availed ourselves of their manner of cultivating this bitter herb. From them, it appears, we also derived the name, which, in High Dutch, is *Hopffen;* and *Hoppe*, *Hop*, and *Hopcruyt* in Dutch.

The first English treatise written expressly on the culture of hops, was by Reynolde Scot, printed in 1574, in 63 pages, black letter, entitled, "A perfite platforme of a Hoppe Garden." He complains that "the Flemmings envie our practice herin, who altogither tende their owne profite, seeking to impownde us in the ignorance of our commodities, to cramme us with the wares and fruites of their countrie, and doe anye thing that myght put impediment to this purpose, dazeling us with the discommendation of our soyle, obscuring and falsifying the order of this mysterie, sending us into Flaunders as farre as Poppering, for that which we may finde at home in our own banksides."

Gerard, who wrote on this plant in 1596, says, "It ioyeth in a fat and fruitful ground: it prospereth the better by manuring. The flowers of hops are gathered in August and September, and reserued to be vsed in beere. The manifold virtues in hops do manifestly argue the holsomnesse of beere above ale; for the hops rather make it phisicall drinke to keepe the body in health, than an ordinary drinke for the quenching of our thirst." He adds, "The flowers are vsed to season beere or ale with, and overmany do cause bitterness thereof, and are ill for the head. The flowers make bread light, and the lumpe to be sooner and easilier leuened, if the meal be tempered with liquor, wherein they haue beene boiled. The buds or first sprouts which come foorth in the spring, are vsed to be eaten in sallads, yet they are more toothsome than nourishing."

The earliest writer who speaks fully on this plant, is D. Rembert Dodoens, professor at Leyden, and physician to Charles the Fifth, who, when he had resigned his Imperial honours, endeavoured to quiet his mind by cultivating his garden, in the monastery of St. Juste, on the borders of Castile. Dodoens' Herbal mentions the two varieties of hops; "the wild hedge hop, and the manured, the bells or bunches (flowers) of which, when ripe, have a very strong smell, and are collected by the brewers of ale and beer, who keep them together, to give a good relish and pleasant taste to their drink. The cultivated hop, he says, is planted in gardens and places fit for the purpose, where it windeth itself about poles; the wild hop groweth in fields, and in herb gardens, as its tender shoots, before they produce leaves, are eaten in salads, and are a good and wholesome meat. This physician says, "the decoction of hops, when drunk, opens the stoppings of the liver, the spleen or milt, and purgeth the blood from all corrupt humours, principally by urine; it is therefore good for those of gross scorbutic habits." He adds, "that the young shoots, eaten as salad in the month of March, have the same virtues, and that the juice of hops is a great purifier of the blood."

Haller, from Isidorus, says, that the first experiment of putting hops into beer, was made in Italy. It does not appear that they were used by the English, in the composition of malt liquor, until after Henry the Eighth's expedition against Tournay, about the year 1524. We therefore conclude, that the art was learnt during the enterprize. In the following reign, hops are first mentioned in our statute books, viz. in the year 1552 (5 and 6 Edward the Sixth, cap. 5.), and by an Act of Parliament of 1603, the first year of James the First (cap. 18), it appears that hops were then produced in considerable quantity in England. But this vegetable-bitter has been subject to caprice, as well as other plants; for, an opinion prevailing that hops possessed deleterious qualities, the City of London petitioned Parliament, to prevent their being put into beer.* The use of them was, therefore, forbidden by an Act of Parliament, in the reign of James the First. This act was little attended to, and, never having been repealed, is strongly contrasted by the Act 9 Anne, cap. 12, which inflicts a penalty of twenty pounds on all brewers who shall use any other bitter than that of hops in their malt liquors; and to prevent their being adulterated by giving them scent or colour by drugs, an Act was passed in the 6th of George the Third, which makes it a forfeiture of five pounds per hundred weight to use this deception; and by the same act, the maliciously cutting hop-bines, growing on poles in any plantation, is made felony, without benefit of clergy.

The hop is the only native plant that is under the control of the Excise. By 9 Anne, cap. 12, a duty of one penny per pound was laid upon all hops growing in Great Britain, and made fit for use; and all hop-grounds were required to be entered, on pain of forty shillings per acre. In the same act an additional duty of three-pence per pound, was laid on all hops imported, over and above other duties; and hops landed before entry and payment of duty, or without warrant for landing, are, by that act, to be forfeited and burnt; the ship also to be confiscated, and the person concerned in importing or landing, to forfeit five pounds a hundred weight.

Hartlib, in his Complete Husbandman, (1659,) says, "that in Queen Elizabeth's time we had hopps from the Low Countries, and that the Frenchman, who writes the Treasure Politick, saith, that it's one of the great deficiencies of England, that hopps will not grow, whereas now it is known that they are the best in the world." However, we find that they were imported occasionally, as late as the year 1695; for 510 cwt. were then brought from Flanders and Holland.*

Coles notices, in his Paradise of Plants, (1657,) "That hops grow in great plenty in Kent and Essex, where there be men of good worth, whose estates consist in hop-grounds." Lord Bacon says, "The planting of hop-yards is profitable for the planters, and consequently for the kingdom." Mortimer observes, that in Kent they plant their hop-gardens with apple-trees and cherry-trees between.

The grower of hops is obliged to keep scales and weights for the use of the Excise; and to remove them before being weighed, subjects him to severe penalties: they must also be packed in bags called pockets, and the weight, with the planter's name and abode, marked on them, with the date of the year in which the hops were grown: to alter or obliterate this mark, subjects the offender to a fine of ten pounds: by application to the Excise, they are allowed to be packed in casks under the same regulation.

The cultivation of hops in this country is nearly confined to the southern counties, of which Kent is the principal; although the hops of Farmham in Surrey, bring the highest price in the market, and next to them the Sussex hops are generally esteemed; the former owe their superiority solely to the excellent mode of picking, and not to any physical advantages.—The Worcester hops are the mildest, and possess the peculiar property of bringing beer to maturity before any other.

Hops seem the most uncertain and precarious crop on which the husbandman bestows his labour. The expense of planting and manuring, added to that of the poles, the gathering, and drying, is so considerable, that the planter is only repaid by those occasionally abundant crops which favourable seasons produce. An extraordinarily good crop returns to the planter about 100*l.* per acre, of which must be deducted on the average 50*l.* per acre for expense; but when the uncertainty of a crop, and the many combinations that are required to produce so good a one, are considered, it seldoms happens that the hop-planter is richer than his neighbour, notwithstanding these brilliant returns, that too often delude the unwary and unthinking speculator.

The plants are often injured by the frost in the spring, and they are also subject to various other casualties. A kind of mildew or blight, producing flies, frequently destroys the fairest promise of this plant, and from the height of the poles and the sail they carry, a high wind occasions great havock in the hop-gardens. We are not aware of the experiment having been made of keeping them closer to the ground in the manner of a vineyard, or by espaliers; but by some observations which the author has made on a few plants, which he cultivated for ornament, the flowers were found larger and more abundant on the vines that were trained horizontally, than on those which climbed to a greater height; and we notice, that in all other fruits those nearest the earth ripen the first, and the hop can obtain no more sun at twenty feet from the ground than it would at six feet. If the poles were placed sloping, with horizontal and perpendicular props, the vine could still extend itself without being so subject to tempest. The position of these ranges of trellis poles could be so fixed as to admit the sun and air more freely; the tying and gathering would be more easily accomplished; and it is a curious circumstance in the natural history of this plant, that the vine always takes one direction in winding itself round its pole, regularly ascending from the right hand to the left: this, in trellis work, would avoid confusion or crossing of vines, which is injurious to all plants.

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* *Walter Blith says, in the third edition of* "*English Improver Improved*" (1653), "*It is not many years since the famous city of London petitioned the Parliament of England against two anusancies, and these were Newcastle coals, in regard of their stench, &c. and hops, in regard they would spoil the taste of drink, and endanger the people.*"

* *Hought.* 2. 458.

To describe the present manner of cultivating, gathering, drying and bagging of hops, would be repeating what may be found in every Encyclopedia, and work on agriculture, without adding entertainment or information.

The hop plantations in Sussex have increased from about 5400 to 9500 acres within these last fourteen years, as appears by a statement from the Board of Excise, which was ordered by the House of Commons to be printed in May, 1821.

In a country where malt-liquor forms the general beverage of the greater portion of its inhabitants, it becomes a matter of no small importance to know, that the hop contains an aperient, and diuretic bitter, which makes our beer more salubrious, whilst its balsamic flavour makes it more agreeable, and combines with these advantages, that of preserving the liquor by its agreeably oderiferous principle, which prevents the necessary fermentation from going beyond due bounds.

"The ale," (says Parkinson in his *Theatrum Botanicum*, published in 1640,) "which our forefathers were accustomed only to drink, being a kind of thicker drink than beere, is now almost quite left off to be made, the use of hoppes, to be put therein altering the quality thereof, to be much more healthful, or rather physicall, to preserve the body from the repletion of grosse humors, which the ale engendered."

Ground Ivy, called Alehoof or Tun-hoof, *Glechoma hederacea*, was generally used for preserving beere, before the use of hops was known.

Horehound and wormwood, &c. &c. have been used as a succedaneum, when hops have been dear.

Some authors recommend hops against the stone; others doubt their utility in that complaint; but it has been remarked that since hops have been more generally used fewer persons labour under that malady.

It is said that the perfume of hops is so salutary, that when put between the outer cover and the pillow, they will procure sleep to those who are in delirious fevers.

The decoction of the flowers and syrups thereof, are thought good against pestilential fevers; juleps and apozems are also prepared with hops for hypochondriacal and hysterical affections.

"The hop," says Dr. James, "is bitter, detersive, and gives no tincture of red to blue paper.—By this chemical analysis, a little acid, a great deal of volatile concrete salt, and oil, are obtained from it; which shews it to contain some sal-ammoniac, mixed with some sulphur and earth.

In Sweden, they make a strong cloth from the fibres of the hop-vine, after it has been dressed like flax. The Society for encouraging Arts, Manufactures, and Commerce in London, offered premiums, in 1760, for cloth made from hop-stalks. In the year following, Mr. Cooksey produced specimens. In 1791, Mr. John Locket, of Donnington, near Newbury, in Berkshire, had the premium adjudged to him for cloth made from these stalks.

In the months of March and April, while the buds are tender, the country people dress them as asparagus; they are an agreeable vegetable, and esteemed good to purify the blood in the scurvy, and most cutaneous diseases.

PAPERS DIRECTED TO BE PUBLISHED BY THE DELEGATION OF THE UNITED AGRICULTURAL SOCIETIES OF VIRGINIA, AT THEIR MEETING HELD IN THE TOWN OF PETERSBURG, ON WEDNESDAY THE 7TH INSTANT.

NO. II.

On fallowing for Wheat—On the plan of husbandry, best adapted to the light soil of the lower part of Virginia, &c. &c.

BREMO, 21st December, 1820.

Dear Sir,

Your's of the 2d December, did not reach me, until within a few days, from the circumstance of its not being sent to my usual post office.—This will excuse me for not being more prompt in my answer to you. The consciousness that you have counted too largely, upon the information I am able to impart, on the various agricultural subjects referred to in your letter, and the anxious desire, I feel to encourage the spirit of enquiry, which seems to be spreading itself amongst the cultivators of every section of the State, induces me, the more readily to comply with your wishes, as well, to evince my perfect willingness to contribute what I can in so good a cause, as to apprise you promptly of the necessity of your applying to other and better sources, for the desired information.

Your queries shall be taken in the order in which they are made, and without confining myself to the direct answers, shall add such general remarks as appear to me any way connected with rural economy.

"The process of fallowing as practised by myself." This is to plough in a crop of clover, as nearly as possible, at that stage of its growth, when it is in the best state for cutting to make hay. Of course, where there is a full portion of your rotation in Clover, there can be but a part of your fallows ploughed exactly in the proper time, without extra teams, and unusual seasons. Hence, the necessity of beginning a little before the clover has attained the precise point, to yield the greatest advantage from being turned into the earth—and hence too, the necessity of a second ploughing, where your first was early, and the season favourable to vegetation after the process. But I deem it less important to be minute upon this head, as for reasons hereafter to be assigned, I do not think summer fallows and the clover husbandry (which I consider as inseparable,) suited to the sandy soils of the lower part of this state.

2. "The advantages as to product of a clover fallow over wheat after corn?" This may be stated to vary from nothing to a double crop, depending upon the opportuneness and perfection of the process, and the adaptation of the land to the use of plaster of paris. Soils suited to plaster, with a heavy crop of clover ploughed in, at the proper time, previously dressed with three or four pecks of Gypsum to the acre, followed by favourable seasons for rotting the buried clover, and seed in the Month of October, will rarely fail to give two bushels for one, from the same land, after Indian Corn.—On the other hand, a crop of clover (and the heavier the worse for it,) dried by our powerful sun, and consequently imperfectly buried from the hard and unmanageable state, into which the earth is brought frequently by the summer droughts, will often not yield a better crop, than the same land would produce after corn.

3. "The difference in the quantum of labour in fallowing for wheat, and wheat after corn."—This can only be decided by referring to the number and kind of operations which are performed in each process, and as these ought to depend in number and kind, upon a variety of circumstances, the relative expense of the two modes of Husbandry must necessarily vary in like manner. Under a fortunate concurrence of circumstances, fallows may be seeded upon the first ploughing, and completed with a single harrowing; but it often happens, that a second ploughing, and under particular circumstances a third, and two harrowings may be necessary to do justice to the crop. In like manner, a single operation, with a single horse plough, and a slight chopping the step, will frequently do more ample justice to the wheat crop after corn, than under other circumstances will result from cutting up your corn, breaking up with the double plough, harrowing to receive the seed, and sometimes ploughing with single ploughs before the second and last harrowing.

4. "The effects as to improvement and exhaustion." These are also much influenced by the circumstances already adverted to as affecting the production, but it may be assured, that the land is left in much better heart after a fallow crop than after wheat, succeeding corn; when the last, however, has credit by the greater quantity of grain yielded by the two crops over the one, it exhibits too imposing a claim upon the score of profit to be given up, even on our clay lands. On the light sandy lands of the lower country, so much better suited to Indian corn, and less adapted to fallows, I am of the opinion, that wheat after corn, is the most profitable and judicious course of Husbandry.

5. "On what soils is the practice of fallows most beneficial?" Wheat soils, or those having a considerable proportion of clay in them. This being the soil, only upon which clover can be profitably and extensively cultivated, I would recommend summer fallows only, where this description of soil was found, and the clover husbandry practised. Upon this kind of land without clover, I should not hesitate to adopt winter fallows, in other words, the English naked fallow. stirring them with single ploughs thro' the summer, in preference to depending on a late summer fallow—The influence of the sun on this description of soil recently exposed, is not as injurious as on sandy soils, and by no means equal to the evils arising from the hard and untillable state into which our summer sun bakes it.

The remarks on this head sufficiently express my opinion, as to "the profitable introduction of fallows where a reduced sandy soil and hot sun precludes clover."

6. "What is the difference of product between wheat after one ploughing on grazed land, and that not grazed, or is either practised." Both are practised, and when the vegetable matter is turned into the earth, in a favourable state for rotting, that is with some remaining succulence, and succeeded by a suitable season to promote putrefaction, the great agents of which are moisture and heat, the more that has been turned in the better the succeeding crop, and the less the injury sustained from its maturation. But in the two last dry summers, I have known some fields of fallowed wheat almost destroyed by the dry vegetable matter remaining undecomposed in the soil. It seems therefore to follow that the less vegetable matter turned into the soil, the better for the immediate crop, unless it is prepared by decomposition into the food of vegetable life.

7. As to "the period that land may remain under grass, for improvement, before fallowing without causing the crop to be foul." There is a difference of opinion among the Farmers of this quarter, but I think there is a preponderance in favor of the opinion, that clover, (we cultivate no other grass,) ought to be ploughed the summer, twelve months after sowing it, and of course where it is cut at all, the same year of taking off the crop.

My own practice has been to plough in clover the summer two years after sowing it, thinking it reasonable that the land would be more improved by its longer rest, and giving the whole growth of the year it is ploughed to the soil; but the result, especially for the two last years, has disappointed me. It may be objected to my practice generally, too, that the earth becomes much more firmly settled, and is brought into tilth with greater difficulty. On the other hand it may be said, there can be but little more than the mere roots counted upon for the improvement of the soil where the first crop is taken for hay, and the second for seed; and this too, necessarily limits you to the latest period for the performance of your ploughing for the fallow crop, thereby diminishing the chance for a timely preparation.—Where clover is sown merely for the improvement of the land, and not intended to be cut at all, there is little doubt that the best time for ploughing it in, would be the summer twelve months after sowing it, but that seems to be an objectionable clover system, on more accounts than one, which affords neither hay or seed.—The other practice of cutting hay, and ploughing the same year, has been practised by the best farmers on this river, and as they are more experienced, and have been more successful, than myself, I cannot in justice but recommend their practice, in preference to my theory.

8. "What depth of ploughing is necessary where the soil does not exceed three or four inches?" As far as my experience has gone, the depth of ploughing should in all cases depend upon the character of the subsoil. Light soils, based on sterile land, I would plough no deeper than the vegetable mould; but where clay is the foundation, and especially of that description, which is fertilized by exposure to the atmosphere, I would bring up the largest possible proportion of it, that would leave the soil in undiminished productiveness by the mixture; nay, I should be inclined to increase the proportion to a small diminution of its immediate productiveness, for the sake of the great future amelioration. Upon all good wheat soils the ploughing should be as deep as three horses can perform with the best constructed plough. I am sure I know of no upland soil, that would not be rendered entirely unproductive, for at least one year, by being ploughed eighteen inches, or two feet; for although some of our clays become fertile, by exposure to the atmosphere, it requires the operation of at least one winter, for any sensible effect to be produced. It is however stated that the celebrated Fellemburg, whose scientific and agricultural establishment at Hofwyl, has attracted so much attention throughout Europe, has ploughed two feet deep, with an implement requiring the power of fourteen horses. During my residence in the lower county, and in the course of my experiments on the sandy soils of that section of the state, I am satisfied that I did great and lasting injury to some land by ploughing it about six inches deep. This land was on a poor sandy foundation.

Having gotten through your queries, I will add as succinctly as possible, my thoughts on a plan of Husbandry, united to the light sandy lands of the lower parts of the state. I should adopt a system excluding clover, because from the nature of your soil, and the generally reduced state of the land, the attempt at the field culture, upon a large scale, would be attended with no other result but the loss of your seed, and as summer fallows should only be practised as the concomitant of clover, those likewise I should consider as out of the scheme.

Assuming it as the basis of all good husbandry, that for every exhausting crop, there ought to be some counteracting improvement, I would cultivate no more land in corn, than I could manure.—This I think can be effected under a six field rotation, which would reduce the quantity to be manured to one sixth of the arable surface, and the succession of crops should be, first, corn; second, wheat; third, pasture; fourth, peas, and all leguminous crops; cotton, pumpkins, and potatoes might occupy a corner of this field; five, wheat; six, pasture.

The first, and most ostensible objection to this scheme is, the apparent small proportion of corn, not insuring a sufficiency of that necessary crop, and secondly, the difficulty of raising the required quantity of manure. In answer, it may be said, that in the best cultivated counties of England, we are told, they manure as much as one fourth of the arable surface yearly; it is true, that some part of this manure is derived from other resources than those of the farm; to wit, their towns, manufactories and marle pits; but the improvement derived from all these sources, I presume, does not amount to the difference between one sixth and one quarter. Besides, all the tide water districts of Virginia, abound in marle, so that, in this respect, you, in all probability, stand on an equal footing with the English farmers—and if all that labour, which is now bestowed on cleaning land, and renewing our quick decaying fences, and other perishable improvements, which ought to be substituted by more permanent ones, were directed judiciously to the accumulation of the materials of fertility; digging marle, collecting rich earth from bottoms and swamps, those depots of nature, which are constantly by the operation of natural causes swallowing up the primest principles of fertility to be added to the materials common to every farm; I am persuaded, we should find there would be less labour in collecting the means of fertilizing an acre, than in preparing it, from the forest state, and inclosing it for a crop.

An accurate statement in detail of the relative expense of manuring an acre of land and bringing one from the forest state into cultivation, is a desideratum as much called for in Virginia Husbandry, as any that has ever occurred to my mind. If I am not much mistaken, it would prove, that less labour would be required to improve the lands throughout Virginia, than it has taken to reduce them to their present deteriorated state.

As to the objection that 1-6th part would be an insufficient portion of the arable land to have in corn, it may be replied, that, that portion manured at the rate of 20 or 25 loads, of 30 bushels each, to the acre, would, on ordinary land, produce a double crop—and, therefore, would not only be equal to 1-3d, the proportion now usually put in corn, but would produce the clear saving of one half of the labour of cultivation, besides other almost incalculable advantages.

Upon your sandy soils, I think you might reduce the quantity of manure four or five loads to the acre, below what is necessary to produce the same result on the clay lands, of the upper country—for light lands make a much better return, for a small quantity of manure than stiff lands.—I have increased the corn crop 100 per cent. upon the ordinary high lands here, with 25 loads of 30 bushels each, to the acre, which in their natural state would produce about two barrels. I am confident equal effects would be produced from 20 loads upon the light soils of Prince George and Surry.

Where wheat is relied upon as the chief crop for market, as is contemplated in the forgoing scheme, the materials for manure, would be very much increased—and, the frequent recurrence of pasturage would be more than overbalanced by the additional comforts in living, and the profits to be derived from stock, which with your facilities of communication with the best markets, ought to be no inconsiderable item in your annual income.

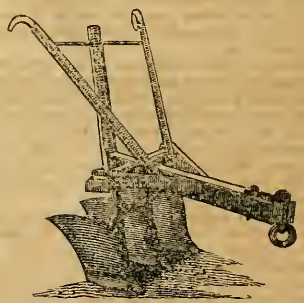
The field in peas, &c. would more than compensate for any contingent deficiency in corn crop, leave something for market, and from the highly meliorating character of its crop, would be in a better state of preparation for wheat than any grass crop turned in, on sandy lands, that I know of. The offal of the products of this field, would contribute largely to the general fund of manure.—And, until a system is devised to increase this fund to an adequate supply, for that field in the rotation which is in the most exhausting of all our crops, indian corn, regular deterioration must be the consequence of our tillage. It is in vain, to amuse ourselves with expedients, practical agriculturists will soon all agree that nothing short of a full manuring once in the rotation, will insure general and permanent improvement.

Accept the assurance of my high regard and esteem.

JOHN H. COCKE.

To Edmund Ruffin, Esq. Secretary, &c. &c.
Bremo, Jan. 31st, 1821.

THE MAXCY PLOUGH.



This valuable implement is now made by Mr. R. Sinclair, for sale at Baltimore, at $12, adapted to three furrows, and at $18 to turn five furrows: to him we are indebted for the following letter, from its much respected inventor, descriptive of its origin and utility.

Edit. Am. Far.

Tulip Hill, on West River,
November 30th, 1822.

To Mr. R. Sinclair.

Dear Sir—I have duly received your letter, and think I can best answer the object of your inquiry respecting my use of the five-furrow seed plough, which I contrived for saving time and labour, and which you saw at West River, by giving you a history of the progress, by which I arrived at the invention.

When I first turned my attention to Agricultural pursuits, it was the practice on the farm, which I cultivate, to cover wheat by small ploughs, each drawn by two mules. Getting in a crop in this manner, I thought extremely tedious, and much too slow for the number of hands and mules employed. I therefore tried harrowing—but the result of my experience was, that wheat stood an unfavourable winter in our situation near the Chesapeake Bay, where snow seldom lies long on the ground, better when covered by the plough than the harrow.

In reflecting, after I became satisfied it was best to abandon the harrow, how a plough might be contrived to save time in seeding, it occurred to me, first to make a double furrow, by attaching two small ploughs together, by means of a crooked beam. The idea was taken from a draft of the *Draveil* plough, which General Armstrong sent in from France, an account of which is to be found in the second vol. of the memoirs of the Philadelphia Agricultural Society. In the 4th vol. of the same work may be found an account of my double-furrow "Draveil plough," communicated by *James Eastburn*. A mistake it is presumed is committed in the name, as it was *Jonathan Eastman*, now of Baltimore, the ingenious inventor of the best cutting or chaffing box, which I have seen, to whom I gave the plough to be presented to the Philadelphia Agricultural Society. This plough differs but little from the French *Draveil*, except in the construction of the beam, of the foremost plough, from which the wheel is discarded, and a simple beam in the common form substituted. It is not too heavy for two mules. It of course required but one ploughman. As it did as much work as two single ploughs, the same force of men and mules got in my wheat crop in half the time occupied in that operation, previous to my using it.

After succeeding in this experiment, I added a third plough, so as to turn *three* furrows. This implement, of course required *three* mules; but one ploughman only was necessary. This plough, however, was, from the length necessary to be given to it to avoid clogging, rather heavy and unwieldly. In considering how I might remedy these defects, the thought occurred of forming a Five-furrow plough upon the plan of the one you saw at West River, which is entirely different from the *Draveil*, and indeed from any which I have ever seen or read of; and in imitation of which you inform me you have made one for my friend and neighbour, John Mercer, Esq. of Cedar Park. By means of this plough, with one ploughman, and three stout mules, the land being well prepared, I seed eight bushels of wheat a day,—which is equivalent to the work of four ploughmen, eight mules and four single furrow ploughs, in covering wheat in the manner formerly practised.

I have now had the Five-Furrow plough in use for two years, and my only reason for not having heretofore had more of them made was, that I had in use three of the Three-Furrow, and four of the two furrow Draveil ploughs. As these wear out I shall supply their place by ploughs made upon the plan of my Five-Furrow plough, the principle of which is equally applicable to two, three, four, or even more than five furrow ploughs. A five furrow plough is wide enough to make at one *bout* a good land for the cradle, and a plough of six or more furrows would be too heavy and unwieldly for three mules or horses. For cultivating corn, or seeding amongst it, two or three furrow ploughs will be best, and I am glad, that you have thought well enough of the plan to construct ploughs carrying three as well as five furrows; for new implements frequently get into bad repute, before a fair trial has been made, from the unskilfulness of the maker. I doubt not with your experience you will make many improvements. Some small ones have already occurred to my mind, which I will suggest, when next I see you, as they cannot well be described in a letter. I do not recollect whether I mentioned to you, that in order to make the five furrow plough run evenly and make all the furrows of equal depth, it is necessary that the *toe* or point of each share, as you recede from the foremost one, should be raised a little above the level of the one immediately preceding it.

Ploughs carrying several furrows do much more even work, than single furrow ploughs can. I use them on hills as well as level lands. I need hardly remark after the above statement, of the saving of labour and time in using them, that I make no use of the small single furrow plough, except for laying off land for sowing. Indeed I do not use it even for that purpose, since I have had your sowing machine, as the land is formed of the proper width by one turn of the five furrow plough.

I have thus given you a history of my use of the many furrow ploughs. You inform me, that you made, and took with you to the late Cattle Show, on the Eastern Shore, one of five and another of three mould boards. I am extremely glad to hear of the highly respectable exhibition, which you witnessed there. I had made my arrangements to attend it, and nothing but the occurrence of indispensable business, would have prevented the gratification of a strong desire, long entertained, of visiting a part of our state, so distinguished for the urbanity, hospitality and intelligence of its inhabitants.

I remain, very respectfully your friend,

V. MAXCY.

To Mr. Robert Sinclair, *Baltimore.*

* * *

LIVERPOOL MARKETS.

The following state of the market is from Myers' Liverpool Price Current of the 4th Nov.

"The demand for Ashes still continues very good; during the week, 250 barrels Montreal Pot have been sold at 39s. 6d. to 40s.; and 150 bls. Pearl at 44s. to 45s. per cwt.

The extensive demand lately noticed for Cotton has in a great degree subsided; and as some holders have been pressing their stocks upon the markets, purchases have in some instances been made at a decline of 1-8 per lb. on Boweds, Orleans and Tennessee—Sea Islands, however, remain without alteration. The transactions consist of 289 Sea Islands at 12 to 16¼d, including 10 at 21d and 20 at 2s; 1584 Boweds 6¾ to 8¾d; 585 Orleans 8d to 11d; 1397 Tennessee 6½ to 8 1-8.

Stemmed Tobacco, and the middling to good qualities of Virginia Leaf, have continued in fair request throughout the week, at former prices, and about 70 hhds. very ordinary Kentucky Leaf have been taken for export at 2 1-8 per lb. Two hundred barrels Turpentine have been sold by private sale at 14s per cwt.

Editorial Correspondence

SILK—MILLET—PEAS—CULTURE OF GRAPES—AND FABRICATION OF WINE.

Columbia, S. C. Dec. 6th, 1822.

John S. Skinner, Esq.

Dear Sir,—I have received your obliging letter of the 19th ult. containing a sample of Silk made in New England, and exhibited at the Brighton Show. The silk is very fine, even, strong, and of a beautiful colour. If such can be made so far North, what greater success have we not a right to expect in the Southern states. I have also received the Chili Peas and Beans, you were so obliging as to send me, for which am much obliged to you.

I sent down to Charleston, a few days since, to be forwarded to you by the first opportunity, a small box containing some *Egyptian Millet;* I must call it so, until I know a more proper name for it, although there is some difference in the appearance of the grain, the plants from either varieties are, as far as I can judge, perfectly similar, and all equally good and abundant for forage, either to be consumed green or cured like corn-blades. As for the grain, I have never made any use of it but for seed. Birds and poultry are very fond of it, and have destroyed a great deal of mine this year. That the seed is very good to eat, can scarcely be doubted, and it can probably be prepared in a variety of ways. This plant grows from 10 to 15 feet high, one seed puts out from 10 to 30 stocks, of the size of common Indian corn. Each stock not only bears one ear on its summit, but branches out so as to have as many as eight or ten ears each. To use it for soiling or for winter forage, it may probably be best to cut it when it is about three feet high. In this manner, 4, 5 or 6 cuttings may be obtained, according to the length of the season. It ought to be planted about the same distance as Indian corn, and that which is intended for seed ought not to be cut at all. The time of planting is as early as there is no danger of frost. As it grows so large, one seed of course, is sufficient in each hill; and when it has come up too thick, it is best to pull up all but one plant and transplant them; for it bears transplanting extremely well, which is a great advantage.

You will also find in the box, a small paper of a particular kind of Field Pea. It grows somewhat like the Cow Pea, and is very productive. I had only about a large tea spoon full of it, and these produced, with scarcely any care, more than one bushel. It will do very well to plant with a corn crop. It would also answer very well for ploughing in green, as the root is small and the plant large, from which circumstance, it is presumeable, that it draws much nourishment from the atmosphere, and will return to the land more than it gets from it. These seeds are, of course, to be distributed, according to your pleasure, to your agricultural friends.

You request "that I inform you of the fate of the Grape vines I brought from France." That you may know, more fully, the reasons of my bad success with them, I shall state all the facts connected with their importation. Thinking it desirable to have a great variety of vines for experiment, that I might select those that seemed best suited to our soil and climate, I, while in Paris, procured a letter of recommendation to the Minister of the Interior, for the purpose of begging the favour of a supply of vine cuttings from the Royal nurseries. The Minister very obligingly gave me a letter for Mr. Bose, Intendant of the Royal Nurseries, requesting him to furnish me with all the vines I might wish to have, that were in the extensive collection under his superintendance. In this latter gentleman, I also found a person much disposed to do every thing in his power that might be advantageous to the United States, and particularly to the State of South Carolina, where he had formerly resided some time, and had been very hospitably treated. The time of my departure from France being near at hand, I called upon him and requested that the vines might be got ready for me in a few days, to which he objected, as the season (October,) was not sufficiently advanced to allow the cutting of the vines with safety; but promised to send them to Havre by the 10th of November, which he did very punctually. Owing, however, to the heavy tonnage duties laid reciprocally on the ships of the American and

French nations, I found it difficult to procure a passage to any of the Southern ports, and, lest I should be detained in France much longer than it was convenient to me, I sailed a few days before the arrival of the grape vines. They were, therefore, left at Havre until an opportunity offered; and by the time I received them in Columbia, which was the last of April, they had been cut nearly six months, and they appeared so dry that I scarcely expected one of them would grow. I planted them all, however, and out of 264 different kinds, only about 40 vegetated at all, and the greatest number of these so feebly that I have only 10 or 12 of them alive at present. These, with about the same number which I had before, make yet a tolerable collection. It is a subject of much regret to me that this great and doubtless, very valuable collection, probably the greatest ever imported to the United States, should have thus almost totally failed from circumstances not within my control. It can scarcely be doubted, that in this great number of kinds, several would have been found very suitable to our climate, and have proved ultimately a most important object in our Southern States.

The little experiment which I have undertaken in our Sand-hills, has been considerably neglected, in consequence of my having been engaged in other and dissimilar objects, and I have not a man to whom I can confide the cultivation of the vine. It progresses nevertheless, and promises full success.

I have several vines of Scuppernong in my garden, which is a very dry spot, and although they grow well, they bear but indifferently. From their appearance, I presume they are found naturally in rich damp soils, like the common Bullace, of which it is evidently a variety. I intend to try them in a suitable soil. It is certainly a rich grape, of which a rich wine can undoubtedly be made, by persons that understand the process well. I have tasted some that would have been very good, had it not been poisoned with apple or peach brandy. It appears to me a very strange notion, which most people have in this country, that wine cannot be made without some brandy being put into it. Were they to suffer the grapes, after they are fully ripe and washed, to ferment to a proper degree, there is no doubt but the wine would be improved in quality, and that it would keep perfectly well, without the addition of spirits. A little reflection would satisfy any person, that if brandy was absolutely necessary for the making of wine, the ancients who knew nothing of distilling, could never have made wine, and we know very well that they not only made wines in quantities, but also kept them longer than any, I believe, ever kept in our time, as we have accounts of wine being kept by them upwards of one hundred years. I have drank Champaigne that was thirty-four years old, and it is well known that this kind of wine is as delicate as any. It was kept in a deep cellar, as all delicate wines ought to be kept. Wine that is bottled properly and kept in a cellar, deep enough to prevent any exposure to a change of temperature, may probably be kept for any length of time. The proper way of bottling wine, and I presume cider, or any other vinous liquor, is to fill the bottle so that there be as little air as possible contained between the wine and the cork, taking care, however, that the bottle is not so full as to break by driving in the cork, and to lay the bottle on its side, so that the cork will be constantly wet. Brandy or any other kind of spirit is not in any wise necessary, unless it be to suit the taste of particular persons.

I am, truly, with respect, Dear Sir, your obedient servant, N. HERBEMONT.

DISEASE OF PEACH TREES.

TO THE EDITOR OF THE AMERICAN FARMER.

Sir,

Having lost some fine young Peach Trees yearly, by a kind of decay, shewing itself early in the season, in the colour and size of the leaf, and then in a defect of the fruit; I examined the opinions of gardeners on the subject, but was much disappointed in their theory. They attributed it to worms about the root of the tree—now I am certain that not one tree in ten, of mine, ever had a worm about them, and moreover, I consider them when present, quite inadequate to such a sudden and universal injury. On weighing every fact that has come to my knowledge, I have no doubt but the damage is done by the irregularity of the weather, in the months of February, March, and perhaps April, farther north than Maryland. Trees that grow in rich cultivated ground, such as fine peaches require, will often start their sap, if the weather is very warm for a week, at least two or three weeks before they should. It is no novelty, in this state, to see the beautiful emblems of spring enveloped in the stern realities of winter—what then becomes of the sap that flowed when such a change of temperature takes place? Will it recede?—No, it cannot to any extent. It must either corrupt or form very imperfect vessels; for the first running of the sap, when the weather continues at a seasonable temperature, is destined *to form a set of new vessels*, and these vessels are to perfect the embryon leaves and fruit. If, therefore, these are imperfect, all that depends on them will be imperfect. It is no argument to the contrary, that we cannot so easily distinguish the imperfection in the blossom; for we know that the blossom is of a hardier nature than either leaf or fruit, and requires comparatively but little nourishment. It is quite a temporal thing, and being formed by the first small issues of sap, it appears to us to have lost nothing, though future observations may determine its period better.—We may truly say, that a tree is formed the same year that it bears; for all previous layers are as bone in animals, though they may be capable of furnishing some nourishment—and when a tree has been completely disappointed in forming its bark, and we see the imperfection of the fruit, we should not speak unphilosophically if we said that it was the fruit of the previous year out of time. In such cases the tree has borne twice from one set of vessels. The tree does not grow that year, and generally falls off, and often dies. In one instance, where a tree failed for four years, I observed that there were several strata in the bark, evidently shewing that instead of a layer of white wood every year, which would have taken place if the bark had formed perfectly, that the imperfect vessels had remained with the bark and formed a stratum. It appears very plain, that in the fall of the year that the interior bark forms straight vessels, which adhere to the white wood of the former year, and in this state of unity the tree bears the winter, and in the spring the increased temperature acts on these new formed vessels, and they become, as it were, maternal, and make in turn a new bark, which two constitute the tree of the year. Dr. Hope's experiments shew that bark will make white wood under certain circumstances, and every American knows that the white wood will replace the bark when stripped off—even in whole orchards, as has often been tried.*

The plan required to prevent this disease, is very obvious, but the accomplishment much more difficult, *to check the sap till the latest period.*—But how shall this be done? Will laying the roots bare in February assist? Will ramming snow about them late in winter, and covering that snow to prevent its escape? Will planting some early vegetables,† such as spinage, about the roots to counteract powerfully, on the first rise of temperature? What ever may do, I have resolved on one thing, never again to manure or dig about any tree in the fall that is tender, neither peach, nor pear, nor grape, for all these go the same way. S. V. S.

P. S. I hope some of our northern orchardists, who lose still more trees than we do, though less infested with the insect, will take up this subject, and pursue it to some advantage.

EXTRACT OF A LETTER TO THE EDITOR, DATED

Rockhall, Md. Nov. 15th, 1822.

Dear Sir,—For some time past, I have had it in contemplation to ask your friendly and ever ready aid, in obtaining correct information respecting some lately invented Threshing Machines in the Eastern States—when, by the last number of the American Farmer, my views have been anticipated by a Mr. Streater, of Pennsylvania. It would be very gratifying to me, and many of the Farmers of this county, to know the cost of these machines, particularly one by Joseph Pope, said to have been exhibited at the late Brighton Cattle Show, and represented as being quite portable and of a simple construction. I should be highly gratified to be informed of the cost, and what would be the expense of freight round to Baltimore? I have had a great desire to have a machine, by which I could separate the grain, and preserve the straw in its original state, for the cutting box; but my farming was too limited for the costly ones in use in this section of country.

The crops of corn in this neighbourhood are very fine, and harvested in delightful order.—There will be very little bad or musty corn sent to your market from this shore next spring.

Your's, respectfully,
THOMAS HARRIS.

SWEET POTATOES, INFORMATION SOLICITED ON THEIR CULTURE—TEA PLANT, ATTEMPTS TO RAISE IT—CROP OR CRAB GRASS, WHEN SHOULD IT BE SOWN?

Charleston, 14th Dec., 1822.

J. S. SKINNER, ESQ.

Dear Sir—I wish you would enquire for me, through the medium of your paper, " what manure has been found best adapted to the growth of the Sweet Potato, and under what culture has it produced most." This is a most valuable root with us, in every respect, and there is nothing which has been so neglected. I am very desirous of improving its culture, but in the few experiments which I have made, the increase did not pay for the extra labour: perhaps some of your correspondents may afford some information respecting its culture, which may prove valuable.

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* *In the economy of vegetables, when a part is denied growth by artificial or accidental causes, other parts grow, thus the fruit buds will grow, when the wood buds are removed or placed horizontally, and vice-versa. If the root is cramped in a pot, the plume will grow, and when the vegetable is placed in free room, the roots grow to the disappointment of the flowers and top. But this is only in health!*

† *The effect of cultivation to promote early growth, as well as of grass, to prevent Trees from shooting early, were very visible in the following accidental experiment, viz: Two trees (Elms) growing in poor ground, were left in the ground, when successively cultivated—A was cultivated in Timothy whilst B was left unploughed. The tree in A put forth perfect foliage one week before the tree in B—afterwards B was manured and cultivated in corn, two years, when it preceded the tree in A (that was in grass,) one week—being two weeks sooner than when in poverty. It is this that secures natural trees, for I have found them equally apt to die in rich cultivated ground, with the best fruit.*

I am sorry to inform you that the seeds of the Tea Plant, politely forwarded to me by you, did not vegetate. They were carefully planted in a box, and regularly attended to, but all in vain.

Will you likewise be kind enough to enquire through the medium of your paper what method has been pursued with the greatest success, for obtaining a crop of the Crab or Crop grass, when cultivated by itself? At what time the ground should be broke up, and what attendance is necessary, and what has been the produce? This grass is a native, but like many other valuable spontaneous productions, has been sadly neglected. I do not know of a single instance in which it has been cultivated alone; it grows well in our corn fields, but owing to some cause, not known to me; it has never succeeded when the ground has been prepared early in the season. It is my wish, therefore, to find out the proper season to sow it.

Respectfully yours, &c.
JOHN D. LEGARE.

To the Editors of the London Farmers' Journal.

ON THE TREAD WHEEL.

Norfolk, Oct. 10th, 1822.

Sir,—In your paper of Monday last, I see a letter signed C. on the Tread Wheel, stating it to operate unequally as a punishment, as the old or infirm man needs work as hard as the younger and most robust, and recommending a wheel of a conical instead of a cylindrincal shape, for the relief of the weaker, who are to work at the lesser end.

Instead of this, I think it would be better to adhere to the cylindrical form, permitting those whom it may be proper to favour, to tread higher in the circumference of the wheel, for as the labour is shortened, *measuring horizontally from the axle of the wheel*, exactly by so much is the labour diminished. But it is usual to allow a little rest to each prisoner in his turn, and this is effected by the man who stands outermost at one end of the wheel, leaving it for a time, (*i. e.*) till it has performed a fixed number of revolutions, when the outermost leaves it, and the former remounts at the other end, those on the wheel shifting a little to right or left, to make room for him. Thus each man rests in his turn, *but never more than one at a time.*

C's plan would quite prevent this, and it could not very well be done, were that adopted which I suggested. The better way is to have the wheel so constructed that the labour need in no case be too severe, and to make those who are the most robust, or deserving the greatest punishment, not only tread the wheel, but carry on their shoulders more or less of weight. I have lately turned my attention pretty greatly to this subject, being one of the visiting magistrates of a prison, in which a tread wheel, &c. is now erecting. Your's, &c. P.

☞ There could be no objection in cases which required favour, to let two perform the journey of one, by halting the wheel to admit the exchange.
Editor.

The above is published at this time, in consideration of the probability that the *Tread Wheel* will be introduced into many of our Penitentiaries, as a new mode of punishment. There can be little doubt, we think, that, as these institutions are at present conducted, the *comforts* are too many and substantial, and the privations not sufficiently severe *to answer the just* objects of punishment. A table shewing the number of convicts, which have been sent more than once to the Penitentiary, after having escaped or been discharged, would reflect light on this subject—it would be seen that many more break *in* than break *out* of these "humane" establishments.
Edit. Am. Farmer.

PERTHSHIRE RECOLLECTIONS.

Bessie Bell and Mary Gray,
They were twa bonny lassies;
They bulit a bower on yon burn brae,
And thatched it o'er wi' rashes.

During the mortal plague which raged in Scotland about the middle of the 15th century, these "twa bonnie lassies," in a mingled spirit, perhaps of romance and prudent caution, retired to a pleasant "burn side," on the estate of Lord ——, in Perthshire, where they built them a little house of the shrubs and bushes which waved in sweet luxuriance around them; and providing a supply of such comforts of nature as they should direct, designed to remain in their happy seclusion till the terrors of the pestilence were overpast. A lover of one of our fair friends, however, impelled by affection, made a visit to their asylum, and unfortunately bore with him the mortal infection in his clothing. The dear object of his soul's regard fell the first victim. The dear companion of her retirement shortly followed: and the same moss-grown grave which wraps their common clay, is still pointed out to the passing traveller, and is still hallowed by a thousand tender sentiments.

MACBETH.

The prostrated ruins of the castle of this bold usurper are situated about fifty miles from Edinburgh. MACDUFF's castle still remains in the vicinity, a few miles from it; but not so much dilapidated as that of Macbeth, having been formerly dismantled and demolished.

INTERNAL TRADE OF KENTUCKY.

A letter from Cumberland Ford, Kentucky, says, "up to the present period, there have passed this place, 45,421 live hogs for market—say they are worth 7 dollars each, which in my opinion is a moderate calculation, amounts to 317,347 dollars.—5,446 horses and mules at an average of 80 dollars each, make 435,680.—Only 236 stall-fed steers, as yet, say worth 40 dollars each, makes 9,440 dollars. Two or three thousand hogs, I hear, are on the road to be added to the above list. If only 2000 come, they will add to the amount 14,000 dollars more, making in all, (at the lowest calculation of mine,) 777,067 dollars in good money. I trust the time is not very distant when Kentucky will restore her credit, and there will be no more relief measures prayed for, nor stop laws passed, which have disgraced one of the most prolific and rich states in the Union, whose sons are bold and enterprizing beyond any, I believe, in the world."

MATCH TO NOTTINGHAM.

Mr. Abernethy, the Amateur North countryman, completed his match to go to Nottingham from Kingsland, yesterday. It was to go the ground on foot, 246 miles, in 90 hours, for a bet of 100 Sovereigns only; and for another bet of 50 Sovereigns, that he did 135 miles in 48 hours. He won both bets easily, and arrived at Kingsland yesterday, one hour and ten minutes within the given time, and but little fatigued. This is beating the Powells, the Barclays, West, &c. by much odds. Mr. Abernethy travelled 140 miles in the first two days, halting six hours only.

Hint to Farmers.—The Society of Shakers at Canterbury, (N. H.) within a few weeks, sold *ten* barrels of Cider in Boston, for which they received *one hundred dollars* in cash, whilst good common Cider has been selling for one dollar a barrel. Such is the difference between good and very good!

A calf belonging to General Pierce, of Hillsborough, (N. H.) was found on the 21st ultimo, to weigh *six hundred and nineteen pounds*, when six months and one day old.

Dentifrice.—Take sage and salt, of each a like quantity, and pound them together; then bake the mixture till it be hard, and make a fine powder thereof, then therewith rub the teeth evening and mornings, and it will take away all yellowness.—*Markham's English Housewife.*

THE FARMER.

BALTIMORE, FRIDAY, JANUARY 3, 1823.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $7 25—Howard st. Superfine, $6 87½—Wharf, do. 6 12½—Wheat, white, $1 35 to 1 40—Red do., $1 27 to 1 30—Rye, 70 to 72 cents—Corn, 60 to 63 cts.—Oats, 35 to 37½ cents—Beef, live cattle, $5 to $5 50 per cwt.—Beef, 8 cents per lb.—Bacon, round, 10 to 11 cts.—Pork $4 50 to 5 50 per c̄ lb.—6 to 8 cts. per lb.—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Clover seed, $9 to 10—Timothy seed, 4½ to $5—Flax seed, 75 to 80 cts.—Whiskey, from the wagons, 32 to 34 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, none in market—Herrings, No. 1, $3 62½ per bbl.—No. 2, $3 37½—Fine salt 80 to 90 cts. per bush.—Coarse, do. 75—Butter, 20 to 25 per lb.—Eggs, 25 cts. per doz.—Turkeys, $1 25—Geese, 28 to 37½ cts.—Chickens, $1 50 per doz.—Straw, $10 per ton—Hay, $17.

Maryland Tobacco—of the fine qualities, none in the market—Good Patuxent, $6 to 8, scarce—Inferior, $2 to 5, plenty and dull—seconds, $1 25 to 5—Very little doing in the market.

AGENTS FOR THE AMERICAN FARMER.

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THE AMERICAN GARDENER;

Or a Treatise on the Situation, Soil, Fencing and Laying-Out of Gardens; on the making and Managing of Hot Beds and Green-Houses; and on the Propagation and Cultivation of the several sorts of Vegetables, Herbs, Fruits and Flowers.

(Continued from page 310.)

CHAPTER III.

On Propagation and Cultivation in general.

124. In order to have good Vegetables, Herbs, Fruits, and Flowers, we must be careful and diligent in the Propagation and Cultivation of the several plants; for, though nature does much, she will not do all. He, who trusts to chance for a crop, deserves none, and he generally has what he deserves.

125. The Propagation of plants is the *bringing of them forth*, or the *increasing and multiplying* of them. This is effected in several different ways: by *seed*, by *suckers*, by *offsets*, by *layers*, by *cuttings*. But, bear in mind, that *all* plants, from the Radish to the Oak, *may* be propagated by the means of *seed;* while there are many plants which can be propagated by *no other means;* and, of these the Radish and the Oak are two. Let me just qualify, here, by observing, that I enter not into the deep question (which so many have puzzled their heads with) of *equivocal generation*. I confine myself to things of which we have a certain knowledge.

With regard to Propagation by means *other* than that of seed, I shall speak of it fully enough under the names of the several plants, which are, as to the way of propagating them, to be considered as exceptions to the general rule. Therefore, I shall, in the present Chapter, treat of propagation by *seed* only.

126. Cultivation must, of course, differ, in some respects, to suit itself to certain differences in the plants to be cultivated; but, there are some principles and rules, which apply to the cultivation of all plants; and it is of these only that I propose to speak in the present Chapter.

127. It is quite useless, indeed it is grossly absurd, to prepare land and to incur trouble and expense without duly, and even *very carefully*, attending to the *seed* that we are going to sow. The *sort*, the *genuineness*, the *soundness*, are all matters to be attended to, if we mean to avoid mortification and loss. Therefore, the first thing is, the

SORT OF SEED.

128. We should make *sure* here; for, what a loss to have *late* cabbages instead of *early* ones! As to beans, peas, and many other things, there cannot easily be mistake or deception. But, as to cabbages, cauliflowers, turnips, radishes, lettuces, onions, leeks, and numerous others, the eye is no guide at all. If, therefore, you do not *save your own seed* (of the manner of doing which I shall speak by and by,) you ought to be very careful as to whom you purchase of; and, though the seller be a person of perfect probity, he may be deceived himself. If you do not save your own seed, which, as will be seen, cannot always be done with safety, all you can do, is, to take every precaution in your power when you purchase. Be very particular, very full and clear, in the order you give for seed. Know the seedsman well, if possible. Speak to him yourself, on the subject, if you can; and, in short, take every precaution in your power, in order to avoid the mortifications like those of having one sort of cabbage, when you expected another, and of having rape when you expected turnips or ruta baga.

TRUE SEED.

129. But, besides the *kind*, there is the *genuineness* to be considered. For instance, you want *sugar-loaf cabbage*. The seed you sow may be *cabbage:* it may, too, be *sugar-loaf*, or more that than any thing else: but, still, it may not be *true to its kind*. It may have become degenerate; it may have become *mixed*, or *crossed*, in generating. And thus, the plants may very much disappoint you. *True* seed is a great thing; for, not only the time of the crop coming in; but the quantity and quality of it greatly depend upon the *trueness* of the seed. You have *plants*, to be sure; that is to say, you will have *something* grow; but you will not, if the seed be not *true*, have the thing you want.

130. To *insure* truth in seed, you must, if you purchase, take all the precautions recommended as to *sort of seed*. It will be seen presently, that, to save true seed yourself, is by no means an easy matter. And, therefore, you must sometimes purchase. Find a seedsman that does not deceive you, and stick to him. But, observe, that no seedsman *can* always be sure. He cannot raise *all* his seeds himself. He must trust to others. Of course, he may, himself, be deceived. Some kinds of seed will keep a good many years; and, therefore, when you find, that you have got some *very true seed* of any sort, get some more of it; get as much as will last you for the number of years that such seed will keep; and, to know how many years the seeds of vegetables and herbs will keep, see paragraph 150.

SOUNDNESS OF SEED.

131. Seed may be of the right *sort;* it may be *true* to its sort; and, yet, if it be *unsound*, it will not grow, and, of course, is a great deal worse than useless, because the sowing of it occasions loss of time, loss of cost of seed, loss of use of land, and loss of labour, to say nothing about the disappointment and mortification. Here, again, if you purchase, you must rely on the seedsman; and, therefore, all the aforementioned precautions are necessary as to this point also. In this case (especially if the sowing be extensive) the injury may be very great; and, there is no *redress*. If a man sell you *one sort of seed for another;* or, if he sell you *untrue seed;* the *law* will give you redress to the full extent of the injury proved; and the *proof* can be produced. But, if the seed does *not come up*, what *proof* have you! You may prove the *sowing;* but, who is to *prove*, that the seed was not *chilled* or *scorched*, in the ground? That it was not eaten by insects there? That it was not destroyed in *coming up*, or in *germinating?*

132. There are, however, means of ascertaining, whether seed be *sound*, or not, before you sow it in the ground. I know of no seed, which, if sound and really good, will not *sink in water*. The unsoundness of seed arises from several causes. *Unripeness*, *blight*, *mouldiness*, and *age*, are the most frequent of these causes. The two first, if excessive, prevent the seed from ever having the germinating quality in them. Mouldiness arises from the seed being kept in a *damp place*, or from its *having heated*. When dried again it becomes light. *Age* will cause the germinating quality to evaporate; though, where there is a great proportion of *oil* in the seed, this quality will remain in it for many years, as will be seen in Paragraph 150.

133. The way to *try* seed is this. Put a small quantity of it in *luke-warm* water, and let the water be four or five inches deep. A mug, or basin, will do, but a large tumbler *glass* is best; for then you can *see* the bottom as well as top. Some seeds, such as those of cabbage, radish, and turnip, will, if good, go to the bottom at once. Cucumber, Melon, Lettuce, Endive, and many others, require a few minutes. Parsnip and Carrot, and all the *winged* seeds, require to be worked by your fingers in a little water, and well *wetted*, before you put them into the glass; and the carrot should be *rubbed*, so as to get off part of the *hairs*, which would otherwise act as the feathers do as to a duck. The seed of Beet and Mangel Wurzel are in a *case* or *shell*. The rough things that we sow are not the *seeds*, but the cases in which the seeds are contained, each case containing from *one* to *five* seeds. Therefore the trial by water is not, as to these two seeds, *conclusive*, though, if the seed be very good; if there be four or five in a case, shell and all will sink in water, after being in the glass an hour. And, as it is a matter of such great importance, that every seed should grow in a case where the plants stand so far apart; as *gaps* in rows of Beet and Mangel Wurzel are so very injurious, the best way is to reject all seed that will not sink case and all, after being put into warm water and remaining there an hour.

134. But, seeds of all sorts, are, sometimes, if not always, part sound and part unsound; and, as the former is not to be rejected on account of the latter, the *proportion* of each should be ascertained, if a separation be not made. Count then a hundred seeds, taken promiscuously, and put them into water as before directed. If fifty sink and fifty swim, half your seed is bad and half good; and so, in proportion, as to other numbers of sinkers and swimmers. There *may* be plants, the sound seeds of which will *not sink;* but I *know of none*. If it be found in any instance, they would, I think, be found in those of the Tulip-tree, the Ash, the Birch, and the Parsnip, all of which are furnished with so large a portion of wing. Yet all these, if *sound*, will sink, if put into *warm* water, with the wet worked a little into the wings first.

135. There is, however, another way of ascertaining this important fact, the soundness, or unsoundness of seed; and that is, by *sowing them*. If you have a *hot-bed;* or, if not, how easy to make one for a hand-glass (see Paragraph 94,) put a hundred seeds, taken as before directed, sow them in a flower-pot, and plunge the pot in the earth, under the glass, in the hot-bed, or hand-glass. The climate, under the glass, is *warm;* and a very few days will tell you what proportion of your seed is sound. But there is this to be said; that, with strong heat under, and with such complete protection above, seeds may *come up* that would not come up in the *open ground*. There may be enough of the germinating principle to cause vegetation in a hot-bed, and not enough to cause it in the open air and cold ground. Therefore I incline to the opinion that we should try seeds as our ancestors tried Witches; not by fire, but by water; and that, following up their practice, we should reprobate and destroy all that do not *readily* sink.

SAVING AND PRESERVING SEED.

136. This is a most important branch of the Gardener's business. There are rules applicable to particular plants. Those will be given in their proper places. It is my business here to speak of such as are applicable to *all* plants.

137. First, as to the *saving* of seed, the *truest* plants should be selected; that is to say, such as are of the most perfect *shape* and quality. In the Cabbage we seek small stem, well-formed loaf, few spare, or loose, leaves; in the Turnip, large bulb, small neck, slender-stalked leaves, solid flesh, or pulp; in the Raddish, high colour (if red or scarlet,) small neck, few and short leaves, and long top. The marks of perfection are well known, and none but perfect plants should

be saved for seed. The case is somewhat different as to plants, which are some male and others female, but, these present exceptions to be noticod under the names of such plants.

138. Of plants, the early coming of which is a circumstance of importance, the very earliest should be chosen for seed; for, they will almost always be found to include the highest degree of perfection in other respects. They should have great pains taken with them; the soil and situation should be good; and they should be carefully cultivated, during the time that they are carrying on their seed to perfection.

139. But, effectual means must be taken to prevent a *mixing* of the sorts, or, to speak in the language of farmers, a *crossing of the breeds.* There can be no cross between the *sheep and the dog:* but there can be between the *dog and the wolf;* and, we daily see it, between the *greyhound, and the hound;* each valuable when *true* to his kind; and a cross between the two, fit for nothing but the *rope:* a word which, on this occasion, I use, in preference to that of *halter*, out of respect for the modern laws and usages of my native country.

140. There can be no cross between a *cabbage and a carrot;* but there can be, between a *cabbage and a turnip;* between a *cabbage and a cauliflower* nothing is more common; and, as to the different sorts of cabbages, they will produce crosses, presenting twenty, and perhaps a thousand, degrees, from the Early York to the Savoy. Turnips will mix with radishes and ruta-baga; all these with rape; the result will mix with cabbages and cauliflowers; so that, if nothing were done to preserve plants true to their kind, our gardens would soon present us with little besides mere herbage.

141. As to the *causes* I pretend not to dive into them. As to the "*affectionate feelings*" from which the effect arises, I leave that to those who have studied the "loves of the plants." But, as to the *effect* itself I can speak positively; for, I have now on the table before me an ear of Indian Corn having in it grains of *three distinct sorts;* White Corn, that is to say, colour of bright *rye-straw;* Yellow-Corn, that is to say, colour of a deep-coloured *orange;* Sweet Corn, that is to say, colour of *drab*, and deep-wrinkled, while the other two are plump, and smooth as polished ivory. The *plant* was from a grain of White-Corn; but, there were Yellow, and Sweet, growing in the same field, though neither at less than *three hundred yards* distant from the white. The whole, or, at least, the greater part, of the White-Corn that grew in the patch was mixed (some ears more and some less) in the same way; and each of the three sorts were mixed with the other two, in much about the same proportion that the White-Corn was.

142. Here we have the different sorts assembled in the same ear, each grain retaining all its distinctive marks, and all the qualities, too, that distinguish it from the other two. Sometimes, however, the mixture takes place in a different way, and the different colours present themselves in *streaks* in all the grains of the ear, rendering the colour of the grains *variegated* instead of their being *one-coloured.*

143. It is very well known, that effects like this are never perceived, unless in cases where different sorts of Indian Corn *grow at no great distance from each other.* Probably, too, to produce this intermixture, the plants of the several sorts must be all of the same *age;* must all be equal in point of time of blowing and kerning. But, be this as it may, the *fact* of intermixture is certain; and, we have only to know the fact to be induced to take effectual measures to provide against it.

144. As to *bees* carrying the matter, and *impregnating* plants with it, the idea appears nonsensical; for, how comes it that *whole fields* of Indian Corn are thus mixed? And, in the Indian Corn, let it be observed, the *ear*, that is to say, the *grain-stalk*, is at about *four feet* from the ground, while the *flower* is, perhaps, *eight or ten feet* from the ground! What, then, is the *bee* (which visits only the flower) to carry the *matter* to the flower, and is the flower then to *hand it down to the ear?* Oh, no! this is much too clumsy and bungling work to be believed in. The effect is, doubtless, produced by *scent*, or *smell;* for, observe, the ear is so constructed, and is, at this season, so guarded, so completely enveloped, that it is *impossible* for any *matter* whatever to get at the grain, or at the chest of the grain, without the employment of *mechanical force.*

145. Away, then, I think we may send all the nonsense about the *farina* of the *male* flowers being *carried to* the female flowers, on which so much has been said and written, and in consequence of which erroneous notion gardeners, in dear Old England, have spent so much time in *assisting*-Cucumbers and Melons in their connubial intercourse. To men of plain sense, this is something so inconceivable, that I am afraid to leave the statement unsupported by proof; which, therefore, I shall give in a question from an English work on Gardening by the Rev. Charles Marshall, Vicar of Brixworth in Northamptonshire. "Setting the fruit is the practice of most "*good* gardeners, as generally insuring the em "bryos from going off, as they are apt to do at "an early season, when not much wind can be "suffered to enter the bed, and no bees or in-"sects are about, to *convey the farina from the* "*male flowers to the female.* The male flowers "have been *ignorantly* called false blossoms, "and so have been regularly pulled off (as said) "to strengthen the plants; but they are essential "to *impregnate* the female flowers; i. e. those "that shew the young fruit at their base: This "*impregnation*, called *setting the fruit*, is arti-"ficially done thus: as soon as any female flowers "are fully open, gather a newly opened male "flower, and stripping the leaf gently off from "the middle, take nicely hold of the bottom, and "*twirling* the top of the male (reversed) over the "*centre* of the *female flower*, the fine *fertilizing* "*dust* from the male part will fall off, and adhere "to the female part, and *fecundate it*, causing "the fruit to keep its colour, *swell*, and proceed "fast towards perfection. This business of setting "the fruit may be practised through the months "of February, March, and April, but afterwards "it will not be necessary; for the admission of "so much air as may afterwards be given, will "disperse the farina effectually; but if the wea-"ther still is bad, or remarkably calm, setting "may be continued a little longer. If short of "male flowers, *one* of them may serve to *impregnate two females!*"

146 Lest the American reader should be disposed to lament, that such childish work as this is made to occupy the time of English Gardeners, it may not be amiss to inform him, that those to whom the Reverend Gentleman recommends the practising of these mysteries, have plenty of beef and pudding and beer at their maste's expense, while they are engaged in this work of impregnation; and that their own living by no means depends, even in the smallest degree, upon the effect of the application of this "*fine fertilizing* "*dust.*" To say the truth, however, there is nothing of *design* here, on the part of the gardener. He, in good earnest, believes, that this operation is useful to the growth of the fruit of his cucumber plants; and, how is he to believe otherwise, when he sees the fact gravely taken for granted by such men as a Clergyman of the Church of England!

147. Suffice it, now, that we know, that sorts will mix, when seed-plants of the same *tribe* stand *near* each other; and we may easily suppose, that this may probably take place though the plants stand at a considerable distance apart, since I have, in the case of my Indian Corn, given proof of mixture, when the plants were *three hundred yards* from each other. What must be the consequence, then, of saving seed from cucumbers, melons, pumpkins, squashes, and gourds, all growing in the same garden at the same time? To save the seed of *two sorts* of any tribe, in the same garden, *in the same year*, ought not to be attempted; and this it is, that makes it difficult for any *one man* to raise all sorts of seeds good and *true.*

148. However, *some* may be saved by every one who has a garden; and, when raised, they ought to be carefully *preserved.* They are best preserved *in the pod*, or on the *stalks.* Seeds of many sorts will be perfectly good to the age of eight or ten years, if kept in the pod or on the stalks, which seeds, if threshed, will be good for little at the end of three years or less. However, to keep seeds, without threshing them out, is seldom convenient, often impracticable, and always exposes them to injury from mice and rats, and from various other enemies, of which, however the greatest is *carelessness.* Therefore, the best way is, except for things that are very curious, and that lie in a small compass, to thresh out all seeds.

149. They should stand till *perfectly ripe*, if possible. They should be cut, or pulled, or gathered, when it is dry; and, they should, if possible, be dry as dry can be, before they are threshed out. If, when threshed, any *moisture* remain about them, they should be placed in the sun; or, near a fire in a dry room; and, when quite dry, should be put into bags, and hung up against a very dry wall, or dry boards, where they will by no accident *get damp.* The best place is some room, or place, where there is, occasionally at leat, a *fire* kept in winter.

150. Thus preserved, kept from *open air* and from *damp*, the seeds of *vegetables* will keep sound and good for sowing for the number of years stated in the following list; to which the reader will particularly attend. Some of the seeds in this list will keep, sometimes, a year longer, if very well saved and very well preserved, and especially if closely kept from exposure to the open air. But, to *lose a crop* from unsoundness of seed is a sad thing, and, it is indeed, negligence wholly inexcusable to sow seed of the soundness of which we are not *certain.*

	YEARS.		YEARS
Artichoke	3	Chervil	6
Asparagus	4	Cives	3
Balm	2	Corn	3
Basil	2	Corn-Salad	2
Bean	1	Coriander	3
Bean (Kidney)	1	Cress	2
Beet	10	Cucumber	10
Borage	4	Dandelion	10
Brocoli	4	Dock	1
Burnet	6	Endive	4
Cabbage	4	Fennel	5
Calabash	7	Garlick	3
Cale	4	Gourd	10
Cale (Sea)	3	Hop	2
Camomile	2	Horse-Radish	4
Capsicum	2	Hyssop	6
Caraway	4	Jerusalem Artichoke	3
Carrot	1	Lavender	2
Cauliflower	4	Leek	2
Celery	10	Lettuce	3

(continued)

	YEARS.		YEARS.
Mangel Wurzel	10	Rosemary	3
Marjoram	4	Rue	3
Marigold	3	Ruta-Baga	4
Melon	10	Salsify	2
Mint	4	Samphire	3
Mustard	4	Savory	2
Nasturtium	2	Scorzenera	2
Onion	2	Shalot	4
Parsley	6	Skirret	4
Parsnip	1	Sorrel	7
Pea	1	Spinach	4
Pennyroyal	2	Squash	10
Potato	3	Tansy	3
Pumpkin	10	Tarragon	4
Purslane	2	Thyme	2
Radish	2	Tomatum	2
Rampion	2	Turnip	4
Rape	4	Wormwood	2
Rhubarb	1		

151. Notwithstanding this list, I always sow *new* seed in preference to *old*, if, in *all* other respects, I know the new to be equal to the old. And, as to the notion, that seeds can be the *better* for being old, even more than a *year* old, I hold it to be monstrously absurd: and this opinion I give as the result of long experience, most attentive observation, and numerous experiments made for the express purpose of ascertaining the fact.

152. Yet, it is a received opinion, a thing taken for granted, an anxiom in horticulture, that *Melon* seed is the *better* for being *old*. Mr. MARSHALL, quoted above, in paragraph 145, says, that it ought to be "*about four years old*, though some prefer it *much older*." And he afterwards observes, that "if new seed only *can be had*, it should be carried a week or two in the *breeches-pocket*, to dry away some of the more *watery* particles!" What should we do here, where no breeches are worn! If age be a recommendation in rules as well as in Melon seed, this rule has it; for, English authors published it, and French authors *laughed at it*, more than *a century past!*

153. The reader will observe, that, in England, a melon is *a melon;* that they are not, there, brought into market in wagon loads and boat loads, and tossed down in immense heaps on the stones; but, are carried, by twos, or threes, and with as much care as a new-born baby is carried. In short, they are sold at from a dollar to four dollars a piece. This alters the case. Those who can afford to have melons raised in their gardens, can afford to keep a *conjuror* to raise them; and a conjuror will hardly condescend to follow *common sense* in his practice. This would be lowering the profession in the eyes of the vulgar; and, which would be very dangerous, in the eyes of his employer. However, a great deal of this *stuff* is traditionary; and as was observed before, how are we to find the conscience to blame a gardener for errors inculcated by gentlemen of eruditien!

154. I cannot dismiss this part of my subject without once more cautioning the reader against the danger of *unripe* seed. In cases where winter overtakes you before your seed be quite ripe, the best way is to pull up the plants and hang them by the heels in a *dry airy* place, till all green depart from the stalks, and until they be quite dry, and wholly rid of juice. Even in hot weather, when the seed would drop out, if the plants were left standing, pull, or cut, the plants, and lay them on a cloth in the sun, till the seed be all ready to fall out; for, if *forced* from the *pod*, the seed is never so good. Seeds will *grow* if gathered when they are *green* as grass, and afterwards dried in the sun; but they do not produce plants like those coming from *ripe seed.* I tried, some years ago, fifty grains of wheat, gathered green, against fifty, gathered ripe. Not only were the *plants* of the former feeble, when compared with the latter; not only was the produce of the former two-thirds less than that of the latter; but even the quality of the grain was not half so good. Many of the ears had *smut*, which was not the case with those that came from the ripened seed, though the land and the cultivation were, in both cases, the same.

(To be Continued.)

COTTON.

We have recently received from Mr. Stephen Stillman, a very beautiful sample of Cotton, that was raised in Sangamon county, State of Illinois, Lat. 39° 40′; and upon land, that we are told, produced 800 lbs. to the acre, with very little attention. Our correspondent also says, that some of his neighbours raised at least one third more to the acre, and that many settlers, from North and South Carolina, have told him that their cotton was as good and as much to the acre as they used to raise in the Carolinas.

We have likewise been politely favoured by Mr. J. R. Bedford, of Alabama, with a description and drawing of an improvement by Dr. Rush Nutt, of Mississippi, on the Cotton Gin, which is calculated to free cotton from trash and dirt, as perfectly as possible.

Mr. Bedford, during the busy season, resides at New Orleans, to transact commission business, and he informs us that cotton cleansed in these improved Gins, had been readily sold in that market at several cents per lb. more than was at the same time given for cotton of equal staple, but cleansed in the usual manner.

The drawings have been placed in the hands of an engraver, and as soon as he can prepare the cuts, we will publish this useful article. In the mean time, we extract from "Phillips' History of Cultivated Vegetables," a very interesting account of this wonderful Plant, and although the wealth which its cultivation creates, is surprisingly great, yet our readers will find this infinitely transcended, in the consolidation wrought by its manufacture: witness the subsequent history given of a single pound of cotton.—*Ed. Am. Far.*

COTTON.—GOSSIPIUM.

Natural order, Malvaceæ, or Columniferæ. A genus of the Monadelphia Polyandria class.

We are not able to discover on what account the Greeks named this plant Ξυλον and Γοδδπίιον *Xylum* and *Gossipium*. Serapio calls it *Coto*, from whence we seem to have derived the English word Cotton.

There are six distinct species of this plant now discovered; the most common and important of which is the *Xylon herbaceum*, or herby cotton. The vegetable floss is formed in the interior of the blossom of the plant, and surrounds and intermixes with the seeds, when the petals decay.

The cotton down, which is of a nature between wool, silk, and flax, now forms a principal branch of a tree that is happily cultivated in this country; and lest it should be forgotten, that Commerce is not an indigenous plant of England, we will venture to remind the reader, that it is an exotic of the most tender nature, and that it requires the continual care and attention of man to ensure its growth.

There has seldom been more than one large plant known to exist in an age: this, when destroyed, gives rise to its cultivation in some distant part of the globe, where its blossoms beautify, and its fruit enriches the country that nourishes it. Commerce is a native of no particular country, and only thrives in a soil that is manured by honour, equity, and justice. The wisest monarchs have nourished it, and best servants of thrones have protected it. The Kings of Tyre planted it by the water, and it made their city a great nation, and their merchant-men, princes. "By thy great wisdom and thy traffic, hast thou increased thy riches."*

Solomon obtained a branch of this plant from Tyre, through which he made himself the richest monarch of the universe, and his little kingdom the admiration of the world. Alexander sowed its seed in the city to which he gave his own name, and Constantine transplanted it into Constantinople. Edward the First planted it on the banks of the Thames about the year 1296.—It was then a small plant cultivated only by the Hamburgh Company. Elizabeth lived to see it blossom through the nourishment which her enlightened mind procured, not only from the original soil of the Levant, but from the eastern and the newly discovered western world, as well as from the north. The succeeding reigns have enjoyed the fruit, except when it has been blighted by the intestine troubles, or cankered by monopoly; a disease that stints the growth, and nourishes caterpillars.

But, to leave allegory and ideal plants, we travel into the land of Ham, from whence the *Gossipium* plant originated. It is supposed that anciently it grew only in Upper Egypt; but on this we cannot decide so positively as we can affirm that the Egyptians were the people who first made cloth from cotton wool.

The Israelites, who must have learnt the art while in bondage, in all probability were the first who cultivated this plant in the land of Canaan.

From Arabia it would naturally travel towards China, through all the countries that lie below the 40th degree of north latitude; but, as a species of the cotton plant has been found in the same latitude in America, it confirms the opinion that most plants spring spontaneously within a given distance of the Poles, and that their varieties originate from the nature of the soil, or accidental impregnation from plants of a similar species.

The Phœnicians, who were the fathers of trade, and the Greeks, who were the sons of art, would, from their intercourse with Egypt, transplant the *Gossipium* to their own isles.

Pliny says, in his Natural History†, that in the higher parts of Egypt, towards Arabia, there grows a shrub and bush that produces cotton, which is called by some *Gossypium*, and by others *Xylon*. He says, the plant is small, and bears a fruit resembling the bearded nut or filbert, out of the inner shell or husk of which the downy cotton breaks forth, which is easily spun, and is superior for whiteness and softness, to any flax in the world. Of this cotton, he adds, the Egyptian priests of old times delighted to have their sacred robes made. This cloth was called *Xylina*. The same author informs us‡, that in an island in the Persian gulf, there were cotton-trees that produced fruit as large as quinces, which opened when ripe, and were full of down, from which was made fine and costly cloth like linen; and that in an island in the same gulf, called Tylos, there was another kind of cotton tree, called *Gossampines*, that was very productive. Theophrastus also mentions these trees§, which we presume to be the *Arboreum*, or tree cotton, and which seem also the same that Virgil notices:

"Or Ethiopian forests, bearing wool,
"Or leaves from whence the Seres fleeces pull."

This species is a perennial plant or shrub, and was cultivated as a curiosity in this country as long back as 1694.

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* *Ezekiel.*

† *Book xix. c.* 1.

‡ *Book xii, c.* 10 *and* 11.

§ *Book iv. c.* 9.

Nievhoff, who was in China in the year 1655, says, cotton grows in great abundance in that country, and was then one of the principal articles of its trade. The seeds had been introduced into that empire about 500 years previously.—Siam produces the most beautiful cotton; hose and other articles, manufactured from this down, exceeding even silk for lustre and beauty. The seed of this silky cotton has been sown in the Antilles, where the plants flourish, and yield this delicate floss in abundance.

The Turks have long had possession of that part of the Eastern world, from whence the common cotton springs. They cultivate this annual plant in the neighbourhood of Damascus and Jerusalem, as also in the Isle of Cyprus. It is likewise cultivated in Candia, Lemnos, Malta, Sicily, and Naples. This variety of the cotton plant is sown in the spring, on land that has been ploughed and prepared for the purpose; and is cut down when ripe, in the same manner as our harvest. The seed of the cotton is about the size of that of tares, and of rather a clammy nature, which causes it to adhere to the downy substance with which it is mixed, and from which it is separated by the little machines, which discharge the seed on one side, and the cotton on the other. Smyrna alone has furnished us with 10,000 bales of cotton wool per annum. This country formerly took great quantities of cotton-yarn from the Turks; but our manufactories are now so complete, that even the spinning is done by machinery, which enables us to get it turned into thread, both more regularly and cheaper than the indolence of the Turks can furnish it; but we still import some cotton-yarn from the Mahometans, which, being drawn from the distaff, has great advantage over the yarn which is spun by machinery for making candle-wicks, particularly those of sperm and wax, as the fine threads being drawn straighter, are not so liable to spring out in burning, which causes the candles made of other cotton to gutter and burn irregularly.

It appears that we had made some progress in the manufactory of cotton in Queen Elizabeth's reign, as Gerard observes in his History of Plants, "To speake of the commodities of the wool of this plant, it were superfluous; common experience, and the daily vse and benefit we receive by it, doth shew; so that it were impertinent to our history, to speake of the making of fustain, bombasies, and many other things that are made of the wooll thereof."

This author appears to have been the first who attempted to cultivate the Gossipium plant in England, for he says that, "it groweth about Tripolis and Alepo in Syria, from whence the factor of a worshipful merchant in London, Master Nicholas Lete, did send vnto his said master diuers pounds weight of the seede, whereof some were committed to the earth at the impression hereof: the success we leave to the Lord. Notwithstanding, my selfe, three yeares past, did sowe of the seedes, which did grow very frankly, but perished before it came to perfection, by reason of the colde frostes, that overtooke it in the time of flowring."

The cotton manufactory alone has raised Manchester from an humble town to a place of the first importance. It has for near two centuries been increasing in size and in trade; and the perfection to which our machinery and the industry of the people have arrived, within these last fifty years, has multiplied the inhabitants, and increased the trade from the supply of its neighbourhood with a few domestic articles, to furnishing the most distant countries, as well as the most sumptuous courts, with its useful and elegant productions.

Calico, or cotton cloth, is now generally become a substitute for linen cloth throughout the kingdom, not only for the finer parts of female dress, but even for domestic purposes, where strength and durability are required. Calico is so called from Callicut, a city on the coast of Malabar, being the first place at which the Portuguese landed when they discovered the Indian trade. The Spaniards still call it *Cullicu.*

The demand for printed callicoes becoming common, induced some persons to attempt the art in London, about the year 1676; and in 1722, an act was passed to promote the consumption of our own manufactures, which prohibited the use of foreign calicoes, that were either dyed or printed, to be used as apparel or furniture, under a penalty of five pounds to the informer for every offence; and drapers selling such calico, forfeited twenty pounds.* The effect of this act was this: it drove the calico printers to imitate the India chintzes, by printing Irish and Scotch linens; which was continued until the making of cloth from cotton was established in England.

The manufacture of calicoes and muslins of of every description, with that of velvets, fustians, counterpanes, &c. is now carried on to such an extent, and brought to such perfection, that it is supposed that the neighbourhood of Manchester could supply the whole world with these goods; which, instead of being imported from the East, are at present shipped for the Indies in great quantities. By the aid of our machinery we also produce from cotton, lace of so even a fabric, and at prices so infinitely below what it can be made for in linen thread, that it has in a great measure superseded the use of real lace.

Manchester, being the centre and heart of the cotton-trade, has either given birth to, or attracted genius from all quarters of the nation, to assist in the necessary operations for forming fabrics as numerous as their embellishing colours are various, in which the arts of the engineer, the mechanic, and the artist, as well as the spinner, the weaver, the bleacher, the dyer, the stainer, and the chemist, are all called into action.

This vegetable wool, that employs so great a portion of our population, is imported in a raw useless state, and is advantageously exported, after being stamped with British art and industry.

The following account of a pound weight of unmanufactured cotton strikingly evinces the importance of the trade and employ afforded by this vegetable: "The cotton-wool came from the East Indies to London; from London it went to Manchester, where it was manufactured into yarn; from Manchester it was sent to Paisley, where it was woven; it was then sent to Ayrshire, where it was tamboured; it came back to Paisley, and was there veined; afterwards it was sent to Dumbarton, where it was hand-sewed, and again brought to Paisley; whence it was sent to Renfrew to be bleached, and was returned to Paisley; whence it went to Glasgow and was finished; and from Glasgow was sent per coach to London. The time occupied in bringing this article to market was three years, from its being packed in India till it arrived in cloth at the merchant's warehouse in London: it must have been conveyed 5000 miles by sea, and about 920 by land; and contributed to support not less than 150 people, by which the value had been increased 2000 per cent."†

So wide and so beneficially is the influence of the cotton-trade spread, that to the knowledge of the author of this work, one individual in the metropolis pays annually from ten to twelve thousand pounds for the article of silver-gilt wire, which he prepares for the manufacturers of Paisley, to be woven in the corner of each demy of muslin, in imitation of the Indian custom.

The cotton-wool is not only used for genuine articles, but is employed to adulterate, or as a substitute for silk; and even many of our linen cloths have a considerable portion of cotton in their composition.

Cotton cloth, like that of linen, when decayed, is transformed into paper for printing.

The seed of the cotton-plant intoxicates parrots. Old medical authors mention the seeds as being a good remedy against coughs, and of a singularly stimulating quality.

Leewenhoek accounts for cotton producing inflammation, when applied to wounds in lieu of linen, by a discovery which he made in examining the cotton with a microscope. The fibres were found to have two flat sides, whence he concludes that each of its minute parts must have two acute angles or edges; which acute edges being not only thinner and more subtle than the globules, whereof the fleshy filaments consist, but also more firm and stiff than any of the globulous flesh, it follows that, upon the application of cotton to a wound, its edges must not only hurt and wound the globules of the flesh, but also cut incessantly the new matter brought to them to produce new flesh; and that with more ease, as this matter, not having attained the firmness and consistence of flesh, is the less able to resist its attacks; whereas the linen ordinarily used in wounds, being composed of little round parts, very close to each other, forms large masses, and is thus incapable of hurting the globular parts of the flesh.

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PAPERS COMMUNICATED FOR PUBLICATION IN THE AMERICAN FARMER, BY ORDER OF THE UNITED AGRICULTURAL SOCIETIES OF VIRGINIA.

No. 3.

On Fallowing for Wheat—on gathering and cleaning Clover Seed, &c. &c.

DEAR SIR,

I should have replied to your letter immediately on the receipt of it, had not sickness prevented it. I am now better, and shall give such an answer to your inquiries as my experience and observation enable me to do, without promising you any thing, either new or important, on the subject.

Your first inquiry on the subject of land intended to be fallowed, is, "whether I think it necessary to introduce the scythe or the hoof previous to the first ploughing, or whether I do not think it practicable to obtain equally good crops, from land where the whole mass of vegetable matter has been turned under"

In answer to the first part of this enquiry, I will observe that it is not necessary to use the scythe, or to pasture the land previous to ploughing, provided impediments to *good* ploughing do not exist in the soil, such as stones, stumps, &c. and the mass of grass or other vegetable matter is not too rank for the plough to subvert or completely turn under. If it can be effectually buried by the plough, the more vegetable matter is ploughed in the better for the succeeding crop, and the more fertilizing to the soil. But when this plan is adopted, it is necessary to sow the wheat or rye upon a single ploughing, and harrow in the seed. The former system pursued throughout Pennsylvania and this Valley, is generally exploded. Instead of breaking the fallows early in the spring, stirring them once or twice during mid summer, and again in the fall at seeding time, the more economical and better plan is adopted, of suffering the field to lie in grass during the summer, either for hay, pasture, or to be ploughed in, intoto, where the land was poor and required such aid. But in this case care is taken not to disturb the sod or vegetable mass deposited beneath the furrow. The ploughing is done in August or September, and after lying two, three or four weeks, to meliorate by exposure to the influence of rain and air, the seed is sown and harrowed in lengthwise; that is in *the direction of the ploughing*. This is done in order to prevent the harrows turning up the sod. The harrows to be large and weighty, with strong, *sharp* iron teeth. Those I use are 4½ feet square, with 24 teeth, 12 inches long, 1¼ inches square, and projecting below six inches.—If a single harrowing does not reduce the surface to a good tilth, it may be harrowed again, and the second harrowing may cross the first, if it is found not to disturb the sod. The mass of vegetable matter now buried beneath the surface, and excluded from the influence of the air, will perish, and soon enter into the incipient state of fermentation, and afford both warmth and fertility to the roots of the grain.

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* *7 Geo. I. Stat. i. cap. 7.*

† *Monthly Magazine.*

This system of husbandry is applicable to such soils as are sufficiently loose and friable to crumble before the harrow, fifteen or twenty days after ploughing. It is not adapted to stumpy or stony land, or such as is so stiff or tenacious that it cannot be reduced by a single ploughing and harrowing. But as it is a peculiar property of clover to meliorate the soil, it rarely happens that land clothed with a thick crop of it, two or three years, does not lose its accessive adhesiveness, and crumble before the plough. Few plants so easily enter into a state of decomposition, and disengage so much carbonic acid gas, as clover; but as all plants or grasses do, in a greater or less degree, they must all contribute to the fertility of the soil, if ploughed in. Some of our perennials are subdued with difficulty, and decompose slowly, and none more so than the blue grass. It is necessary that this grass should be *completely turned under*, and not again disturbed by the plough, if intended to be sown in wheat, unless the first ploughing had been done during the winter. In that case, stirring the land in the spring, and again in the summer, would be advisable. The amount then, of what I have said on this subject, is, that the more vegetable matter is *turned under the furrow*, the better; but that it is absolutely requisite that it should be completely buried, especially blue grass, and not again brought to the surface by stirring with the plough or cross-harrowing. If the grass is too rank to be ploughed in, (even with the aid of a log chain attached to the beam, to prostrate it before the coulter) it will be better to use the scythe.—Clover may be mown in September, when brown, and reserved for feed. In this case it will be unnecessary to sow clover seed the succeeding spring.

Your next enquiry relates to gathering and preparing clover seed for market. The management of this requires a judicious attention to the order in which the clover is, when put into the barn or stacks, and the state of the weather when the seed is to be separated from the pug or chaff, which envelopes it. If the clover is mown, it should be quite brown (or black) before it is cut, and immediately raked into winnows or small heaps, and suffered to lie exposed to rain or dew, until the sap and juices of the plant have mostly evaporated. It must then, when in a dry state, be hauled into the barn or built into good ricks, and there remain until January or February, when the air is cold and in its driest state. The heads are then to be detached from the straw by threshing with flails, and using rakes. This is an expeditious part of the process, as the heads separate with great facility. These heads are then placed in a ring, on a good tight floor, and tread with horses until the whole mass is reduced to a fine powder, resembling scotch snuff.

If the seed is good and perfectly dry, and the weather in that state which would make tobacco crumble into powder, by handling it roughly, six horses may tread out ten bushels in a day; but if the weather is humid or even *givy*, (as the tobacco planters term it) this quantity cannot be got out, with the same force of hands and horses, in two days. Tobacco, in this case, affords an excellent hygrometer to ascertain the proper state of the air for this operation. To prevent the dust, which rises during the treading, becoming both offensive and injurious, it is proper to keep open the barn doors, and permit a free passage of air. Shovels must be kept employed to throw up the clover chaff, and confine it to the ring traversed by the horses.

The next operation is to pass it through a common wheat fan, turning it very slowly, and preserving the chaff which falls nearest to the riddle, as that contains seed not yet detached from the pug. This may be trod a second time, or sown in that state. What passes through the fan must now be riddled through a cockle riddle, and lastly through a clover riddle, (easily obtained in Baltimore or Philadelphia) which will permit the seed, and that only, to pass through. This last operation will generate some dust, which (if the seed is for market) may be thrown off by passing it once more through the fan.

But if you use a machine for collecting the clover heads, suffer them to lie in heaps, formed like a hay cock, two or three weeks. During this time they will undergo a slight degree of fermentation and heat, (of course,) which, after getting thoroughly dry, will greatly facilitate the operation of treading out the seed. Let this be done, as in the other case, in cold, dry weather.

I have now, Sir, treated the subject of your request pretty diffusely, as it was your wish that I should be minute; and if any information is communicated, from which you can derive instruction or advantage, it will afford me pleasure to have contributed thereto.

I am, Sir, with respect,
Your very humble servant,
R. P. BARTON.

George E. Harrison, Brandon.

Springdale, July 22d, 1820.

AGRICULTURAL REPORT.

The Mass. Committee on Agricultural Experiments, submit for the consideration of the Board, the following, in addition to their report dated the 10th day of October last, to wit:

That Col. Joseph Valentine, of Hopkinton, is entitled to the society's premium of $30, for having raised the greatest quantity of Indian Corn, being 119 bushels and 26-32 of a bushel, on one acre of land. "The soil is a deep yellow loam—in 1821, the land was cultivated with Indian corn, and manured with ten cart loads of green barn manure, spread on the ground, and eight loads of compost manure put in the hills. In the spring of 1822, the ground was twice ploughed, and 20 cart loads of green barn manure spread on it—it was then furrowed in rows about three feet and a half apart; and about 20 cart loads of barn, hog and slaughter yard manure, were put in the rows; the last mentioned manure was mixed together, with one hogshead of Smithfield lime; the seed was the Brighton twelve rowed yellow corn, the kernels placed about 8 inches apart each way—th corn was hoed three times, all the suckers wer pulled out in July; and in August all the sucker were again taken away, together with the false stalks, and those that were smutty; on the first of Sept. the stalks were topped; and on the 26th the corn was harvested, and spread on a floor under the roof of a long shed, to give a good opportunity for drying it—there was 213 bushels of corn in the ear; one basket of which was shelled, and produced half a bushel and two quarts of shelled corn; so that had the whole been shelled on the day of harvesting it, the produce would have been 119 bushels and 26-32 of a bushel of shelled corn—on the 14th of Nov. the whole was shelled, and measured, and found to be 116 bushels and 28-32 of clear sound corn; the average weight of which was 58 to 59 lbs. the bushel—the entire expense of cultivating this acre of corn, including $35, charged for 40 cart loads of manure, was $44."

That, Payson Williams, Esq. of Fichburg, is entitled to the society's premium of $30, for having raised the greatest quantity of Spring Wheat, being 23 bushels and 28-32 of a bushel, on one acre. "In the Spring of 1822, as early as the frost would permit, the ground was ploughed, and harrowed; the seed, two and a half bushels of the Gilman wheat, sown; again harrowed, and ploughed in fine, with a horse plough, and left in this situation with the belief that the crop would endure our New England drought better, as the surface would be enlarged, thereby retaining more of the dews than a plane surface; the result, compared with neighbouring fields, declares this belief not unfounded. As the field was seeded down with clover, herds-grass, and red-top, this was also ploughed with the wheat; these plants not only stood the drought remarkably well, but at this time have completely covered the ground with the *Farmer's best carpet*. The quantity of grass-seed used by me, is never less than 12 lbs of clover, and one peck of herds-grass, to the acre. Here permit me to observe that innumerable are the instances in this country, where the farmer fails in his grass crops, by not allowing seed enough; and what is worse, the little he does give with such a sparing hand, is suffered to take its chance under that pest in agriculture called a bush harrow, which not only drags stones, and other loose matter, into heaps, but leaves the soil dead, and heavy; and does not cover the seed deep enough to strive with our July drought effectually. It may be asked how the scythe is to follow the plough? to which I will answer, let the roller, an implement which every farmer would keep, did he consult his own interest merely, with a sufficient top or body to contain the larger stones, pass over the field lengthwise the furrow, in the dry part of the fall; this process will not only crush in the small ones, but even the surface for the scythe, without the least injury to the grass roots—to this digression I am impelled by no other motive, however much I may be mistaken, than the wish of advancing in some measure, the interests of my fellow citizens, whose good fortune is to till the soil.—I had the wheat cut very early, when much of the straw was green, which, after laying about two days, was in excellent order for the flail; after which it was equal to swaii hay for fodder—the amount of grain by measurement was 26 bushels and 8-32, from one acre and 18 rods—the quality of the grain is excellent, not one kernel of smut or burnt grain in the crop—the seed prepared by a thorough washing, after which it was immersed in thick white-wash, made from good lime, so as to coat over every kernel—no fears need be entertained from the plentiful use of this liquor, as by way of experiment I have planted wheat after its lying in this liquor four days, which vegetated well." The committee are of opinion that the roller should be used immediately after the seed is ploughed in, in preference to the fall, as recommended by Mr. Williams. Said Payson Williams is also entitled to the premium of $20, for having raised the greatest quantity of Potatoes, being 547 bushels, on one acre. "The land was twice ploughed, and furrowed three feet apart, and the manure, unfermented, made by sheep, and neat cattle, its quantity about 14 cords, placed in hills two feet apart, hands immediately following the cart with hoes to finish the planting process, to prevent the loss by evaporation—planting finished May 21—the kind of seed used was the South American reds, 28 bushels to the acre, cut so as to allow two pieces to the hill—the weeding finished the 15th of June—the second and last hoeing the first of July, the vines beginning to bud, and were about eight inches in height; a few scattering weeds were occasionally pulled up, but no other disturbance was given to the vines till harvesting the crop, which was finished November the 3d; and by a careful measurement was found to be 547 bushels—the expense of cultivating the acre of wheat, including $10 charged for the manure, was $24,71—that of cultivating the acre of Potatoes, including $14 for manure, $54."

That Mr. David Little, of Newbury, is entitled to the society's premium of $20, for having raised the greatest quantity of Mangel Wurtzel, being 970 bushels, and one half of a bushel, on one acre. "The situation of said acre is as follows—swell inclining south-westerly, of a rich yellow loam—in 1821, it was planted with beets, manured with about three cords of compost manure, and produced about 530 bushels. May 9th, 1822, ploughed, harrowed and furrowed three feet apart; four and a half cords of compost manure were put in the furrows and covered with a plough; then a harrow was drawn lengthwise the ridge to smooth the land, the seed was then sowed one row on each ridge, with four pounds of seed—half the quantity would, I think, be sufficient—June 10th, commenced ploughing between the rows, and weeding, and thinning at different times till July 16th—the plants stood 10 or 12 inches apart in the rows—the work was done principally by boys, estimating two boys to be equal to one man. Oct. 3, Nov. 1st and 2d, they were harvested by men and boys, and produced 970½ bushels of Mangel Wurtzel, besides 2 bushels of Carrots, and 109 Cabbages—three loads of the Mangel Wurtzel containing 137 bushels, were weighed at the town scales, the weight according to the certificate annexed, was 3 tons, 2 c. 2 qs. 20 lbs. Six swine were mostly fed with the thinnings from the beginning of weeding, until about the first of October—there are trees on the said lot sufficient to produce 21 barrels of fruit—the entire expense of cultivating this acre of Mangel Wurtzel, including the cost of the manure and gathering the crop, was $23 96 cents."

That, Mr. Adams Knight, of Newbury, is entitled to the Society's premium of twenty dollars, for having raised the greatest quantity of Onions, being six hundred and fifty-one bushels, on one acre. "The soil is a rich gravelly loam, with a gravel bottom; in 1821, it was cultivated with onions, and cabbages; and was manured with about five cords of barn manure, and produced a good crop—after the crop was off the ground, there were five cords of barn manure, and two and a half cords of leached ashes ploughed in—in April 1822, it was once ploughed, and sowed in rows 14 inches apart, which took between 3 and 4 pounds of seed—in the course of the season it was hoed between the rows, and weeded four times—in September the onions were harvested, and there were 651 bushels—the entire expense of cultivating this acre of onions, including 21 dollars and 37 cents, the cost of the manure, was 57 dollars and 38 cents."

That, Messrs. Tristram and Henry Little, of Newbury, are entitled to the Society's premium of twenty dollars, for having raised the greatest quantity of common Turnips, being 687 bushels and a half on one acre. "The soil is a clay loam and had been down to grass 6 or 7 years—in 1821, cut about one ton of hay; it was then ploughed as deep as the sward would turn over; 10 cords of compost manure, the principal part of the compost was marsh mud, spread and well harrowed; it was ploughed in ridges three feet apart; about one pound of seed was sown with a machine on the ridges; and a hard roller made to pass over them, which completed the sowing—when out of the way of the fly, they were thinned to the distance of one foot apart on the ridge—they were twice ploughed and harrowed; and harvested the last of October—the entire expense of cultivating this acre of Turnips, including 20 dollars for manure, was 35 dollars and 82 cents."

That, Silas Little, Esq. of Newbury, is entitled to the Society's premium of Twenty dollars, for raising the greatest quantity of common Turnips, after another crop in the same season; having raised 615 bushels on one acre. "In the year 1821, something less than a quarter part of the acre was cultivated with Turnips, and about five common cart loads of compost manure, such as salt marsh pulverized, strong earth and sand was laid thereon; the produce was 80 bushels, the other three fourths had been laying to grass five or six years; and the present year we sowed Flax seed, where the turnips grew the last year; having spread on about the same quantity and quality of manure as before; we pulled the flax soon after the blossom had fallen off, and there was a middling crop; the other part of the acre produced about 700 weight of hay, which was cut on the 26th of June; and the whole was ploughed and manured—the quantity put on the acre was 19 cart loads, of 40 bushels each—the quality of this manure was similar to that above described, but more sand in order to make the compost better, when mixed with our dark clay loam, with a clay bottom; nearly two thirds of this manure was spread on one half the ground, and after harrowing, was put into small ridges, with a small double mould board plough, two feet and nine inches apart; the other part of the manure was shovelled into furrows made with the plough, the same distance; the plough then passed between the furrows, covered the manure, and although so great a portion of the manure was spread on half the land, yet the other half produced about as much—the quantity of seed used was one pound and a half; the time of sowing was from the 1st to the 10th of July—the flax was pulled the 4th, and that part of the ground sowed the last; the whole was sown with a machine made for the purpose, and but one row on a ridge—when the turnips were up, and out of the way of flies, they were thinned with a hand hoe and fingers, at the distance of 10 or 12 inches, and afterwards twice hoed and twice ploughed, with the small plough above mentioned—the time of harvesting, from the 28th of Oct. to the 1st of November, and there was found to be 615 bushels, well trimmed and fit for the market, and about 5 or 6 bushels of large defective rotten ones—we have weighed several bushels, and find a bushel will weigh 59 pounds—the entire expense of cultivating this acre of turnips including thirteen dollars for manure, was twenty eight dollars and seventy five cents."

That, Mr. Asa Rice, Jr. of Shrewsbury, is entitled to the Society's premium of Twenty dollars, for the account of the best mode of rearing, feeding and fattening Neat Cattle. Said Rice is also entitled to the premium of Twenty dollars, for proving by experiments, to the satisfaction of the Trustees, the utility and comparative value of the Cobs of Indian Corn, when used with or without the grain itself, ground, or broken. A paper on the subject of raising Indian Corn, two successive seasons, with the aid of Plaster Paris, on a high hill on the farm of Mr. Rice, which from its difficulty of approach, had until two years since been neglected, was also exhibited. These communications are too lengthy to be inserted in this report, but your Committee recommended that said papers, together with three very interesting communications from William Hull, Esq. of Newton, on the best mode of raising Indian Corn,—his mode of cultivating seven-eighths of an acre, from which he procured 192 bushels of Corn in the ear, 4 bushels of dry Beans and several bushels of Turnips—and on the culture of Carrots, and Ruta Baga, be copied into the Society's Journal for January next.

Claims for premiums were also exhibited to your Committee by the following persons, for raising the greatest quantity of Indian Corn, on one acre of land, to wit: Mr. Asa Rice, Jr. of Shrewsbury, raised 53 bushels; Mr. Nathan Howe, Jr. also of Shrewsbury, 75 bushels: Mr. Daniel Mears, of Lynn, 87½ bushels; Messrs. Tristram and Henry Little, of Newbury, 116 bushels and 9 quarts; Payson Williams, Esq. of Fitchburg, 116 bushels and 12 quarts; and Mr. Daniel Burnham, of Newburyport, 117 bushels and 8 quarts, Mr. Jacob Wilkins, of Marblehead, raised 57 bushels of Barley, on one acre and an eighth of an acre. "April 12, 1822, the land was ploughed about 8 inches deep, the soil loamy, inclining to gravel, descending to the North East from a ledgy knoll, which included part of the premises. 13th sowed three bushels of six rowed Barley, on what I considered the largest half of the piece—at the same time sowed one and a half bushels of two rowed barley, on the remainder; sowed grass seed over the whole, and ploughed, and harrowed the same in. When the six rowed Barley was about six inches high, it was mowed down, and left on the ground; this was for experiment. July 18, mowed the six rowed Barley, and put it into the barn. 24th, mowed, and put into the barn, the two rowed Barley. The six rowed Barley appeared to be about 12 days forward of the two rowed in ripening—both were stacked separately in the barn; and each quality thrashed and kept separate. August 30th, the barley being cleansed, was measured—the six rowed measured 34 bushels; and the two rowed measured 23 bushels—the straw we consider in value to be equal to the labour." No premium was offered for raising the greatest quantity of Barley; but your Committee are induced to recommend that the Treasurer be authorised to pay said Jacob Wilkins, the sum of Twenty dollars.

For raising the greatest quantity of common Beets, Parsnips, Ruta Baga, Cabbages, and dry Peas—for introducing any Grass not before cultivated in this Commonwealth, and proving by actual experiment, and producing satisfactory evidence of its superiority in any one quality, to any now cultivated—for the most satisfactory evidence on "Soiling Cattle," not less than six in number and through the whole season, together with a particular account of the food given, and how cultivated—for making the experiment of turning in green crops as a manure, on a tract not less than one acre, and proving its utility and cheapness, giving a particular account of the process and its results—for proving by actual experiment, the best season and mode of laying down land to grass, whether Spring, summer or Fall seeding be preferable, and with on without grain on different soils—for raising the greatest quantity of vegetables, Grain, Peas and Beans excepted, for winter consumption of the stock on his own farm, and not for sale in proportion fo the size of the farm and stock kept, having regard to the respective value of said Vegetables as food, stating the expense of raising the same, and the best mode of preserving the same through the winter—for taking up in one season, on his farm, the greatest quantity of good Honey, and shall at the same time, exhibit superior skill in the management of Bees—for giving proof of having produced the largest quantity of dressed Flax raised on one acre. No claims for premiums have been exhibited.

The Board will perceive by the papers accompanying this report, that of the seven claimants for the premium for raising the greatest quantity of Indian Corn on one acre, the quantity produced by four of the competitors was very nearly the same. Your committee in awarding the premium to Col. Valentine, were induced to decide in his favour as well from the quantity of sound corn, as from the weight of the grain; it will be seen that Mr. Burnham's Council Bluff Corn, weighed only fifty pounds; that of Col. Valentine, fifty eight to fifty nine pounds the bushel.

For the Committee,
THOMAS L. WINTHROP, *Chairman.*
Boston, *Dec. 28th*, 1822.

TO THE BREEDERS OF THE VIRGINIA RACE-HORSE.

Stimulated by a love for every thing which gives importance to my native state, and having observed the disrepute and neglect into which you have suffered your blonded stock of horses to fall, I am induced to offer you a few ramarks on that subject. You have long possessed a race of fine horses, and the great match lately run at the city of Washington, has turned the eyes of all the United States to your Stock. Eclipse himself is a descendant of the Virginia horse; and you have stocked the Carolinas, Georgia, Kentucky and Tennessee, with that spirited, generous and noble animal, the *race-horse.* It therefore behoves you, from a consideration of profit as well as a matter of pride, to devote a greater attention to the breeding and rearing of your horses than you have lately bestowed—to return to the particularity of your ancestors, whose attention, zeal and judgment produced so valuable a race of animals. The horse, whether considered alone as ministering to our comforts and convenience in agriculture and the pursuits of pleasure, is highly important, and as yielding profit and affording security in time of war, becomes doubly more so. The Arabians possess the best war horse, which is known by exportation, and they derive from them annually a considerable revenue. The nimble saddle horse, the generous hunter, the majestic coach horse, and the proud and spirited charger, are all the produce of the blooded horse; and we know from experience, that they are the most lasting and durable for the plough. How important then does it become for you to renew your attention and redouble your exertions to preserve and propagate a race of animals so very valuable.—Of all the United States, Virginia has hitherto possessed the finest horses. The liberal exertions of many of her citizens in the costly importation of the Arabian horse, and the best blood stock of England, the judicious crossing of these, aided by her climate and her soil, so congenial to their propagation, have given to her a race, for activity and durability, for speed and bottom, that will vie with all the world.

The value of the *race horse* is daily becoming better known; from Virginia they are sought, and as the demand increases, will your profit enlarge: by exerting the care, particularity and attention you formerly bestowed on breeding, you may continue to derive wealth—and boast and pride yourselves on the possession of the best horse of America.

In suggesting the exercise of more zeal and judgment in your efforts of breeding, I would not recommend the particularity prevailing in Persia and Arabia, of collecting persons to witness and certify to the act of coition of their mares and horses, and the birth of the foals; but I would recommend the preservation of, and a strict regard to pedigree—a care to the perfection and blood of your stallions—the necessity of a remote cross—a caution against the carelessness and villany of grooms in affording, or promoting opportunities of stolen enjoyments—and lastly, and most important of all, I would guard you against the impropriety of overstrained exertions, and urge the necessity of consulting the opinions of celebrated naturalists and breeders.—The great Buffon, and many others assure us that the progeny of animals overstrained in their sexual intercourse, dwindle and degenerate: that foals from stallions serving too many mares, deteriorate from the perfection of their parents—that the chances of conception greatly decrease from an excess of mares; and that disappointment is too often the fate of those who disregard these facts. In England, the most experienced breeders assert, and it is the generally prevailing practice there, that no stallion should perform duty to more than 40 or 50 mares in a season—however, I believe that a horse while young and full of vigour, with careful management, may serve somewhat more; but after he has advanced in years price and reputation, his number should be limited. It often happens that the owner of a fine horse, too greedy for profit, exceeds the power of the horse in the number of mares. Indeed, I am informed in some instances, where the profits are excessive, and the horse's power is quite unequal to the service required for mares of the first character, that the owners, goaded on by avarice, and regardless of the reputation of your stock, crowd upon him many common plough mares, whose progeny is destined for hack and drudges. In cases like these, are you not destined to meet with failure or reap disappointment? And to say the least of it, is it notan injustice to the public, and ungenerous and illiberal to yourselves? Uniting in concert, you might correct such errors by withholding your support, or changing its direction, and thereby teach the avaricious where their interest lies, and the necessity of moderation in their desires of gain. The community have a deep interest in every fine horse, and the owner should never so far forget it as to think alone of his individual profit; he should be made to feel the propriety of preserving the value and reputation of your stock, by consulting the character of the mares, and exercise the justice which is due to his benefactors, by a limitation of their numbers within reasonable bounds. By attending to the hints here thrown out, and exercising the judgment which I know you possess, you will restore the perfection and retrieve the reputation of your horses. Then, you need not decline a contest with the Duke of York, or apprehend darkness or gloom from the recurrence of another *Eclipse.*

BELLEROPHON.
Richmond Enquirer.

SENNA AND PALMA CHRISTI.

Moorfield, *Dec. 25th*, 1822.

Dear Sir,

I have received the Senna seed you sent, which I will plant when the season arrives. I send you enclosed, some seeds, and three or four of the dry entire pods, of our kind—the seeds of this are much smaller than those you sent me—ours are of the size and shape of grape seeds; yours like small, flat kidney beans; but in colour, they are nearly alike, being of a dark, greenish hue. I have lodged in Baltimore twenty or thirty pounds of the Virginia herb, to be tried by any physician that chooses. It is left with Mr. Butler, an apothecary, for that purpose. I enclose you a few lines, which I received from Dr. Daniel Annin, of Opiquon, Frederick County, who was with me, and took a little home for trial. He observes, under date of Nov. 1822, "I "feel authorised to say, by a small trial, in one "case, of your Senna, that it is no doubt, a species of that plant, and may be used as a substitute for the imported Senna, with advantage." If physicians in your vicinity would try it, they may call at Mr. Butler's, and take some for that purpose.

I raised sixty bushels of Palma Christi, or Castor Oil Beans, on two and one half acres of land, upon which stood five large apple trees, that destroyed ten hills square each—there was also a row of cherry and peach trees, on two sides of the ground, that injured the outside rows all their length.

I found one stock in a hill was better than more, bearing more beans, and not growing so high. Where there were more stalks, we could not get the bunches of beans without breaking them down, which was not the case with solitary stocks—these branched out sooner and bore more beans. If any farmer wishes to try the crop, I would advise him, if his land is good, to put two beans in a hill, and pull one plant up when they have grown four or five inches high. The plants should be four feet one way and four and one half feet the other—these he should work as he does his corn.

I am, with respect, your's,
ABEL SEYMOUR.
J. S. Skinner, Esq.

FOR THE AMERICAN FARMER.

PROPOSAL TO FORM A PERMANENT FUND FOR THE MARYLAND AGRICULTURAL SOCIETY.

Mr. Skinner,

The Cattle Shows and Fairs, which are held in Maryland, are novel exhibitions here, and excite much attention. Many persons attended to view the display of valuable stock, who are not directly interested, not having any to exhibit. But the far greater number seek information, and estimate properly the advantages which will result to the community, from the exertions of those praise-worthy, practical farmers, and others, who are improving our breeds of stock.

The Agricultural Society of Maryland, is yet in its infancy; the members are not very numerous, and as all the funds are derived from a small annual contribution from each member, the amount is too limited to enable the society to offer pecuniary rewards, sufficient to induce those who would prefer compensation in that way, to make efforts to be noticed in the distribution.

To gentlemen of wealth, the pecuniary gratuity is not an objeet; they esteem more highly, the honour of excelling, and it is honourable to excel in any laudable pursuit. But a farmer, who has to scuffle hard to get along, finds all his time and funds employed, in carrying on his business in the old way, and will not risk a few extra dollars, if he has them to spare, or employ a part of his time, in making experiments, unless he can make a reasonable calculation for profitable returns. And farmers who have only the common breeds of the country, have now, no encouragement to exhibit for premiums at cattle shows, for those who have been able to procure the improved breeds, will carry off the prizes, until those fine animals become more numerous

But although the funds of the society are very limited, I think it would be profitable to share the premiums between stock and crops. If a farmer has not got stock to vie with the Teeswater, and Devons, and Dishleys, he must have managed his business very badly, if he has not a few acres of rich land; and although he may have nothing to compare with Champion, or Bergami, or Mr. Barney's Bakewell's *five inches fat on the ribs*, he might shew, that he can raise as much corn, wheat, potatoes, turnips, &c. &c., per acre in Maryland, as can be done elsewhere. For instance, I would refer to Mr Bennett's and Gen. Ringgold's crops of corn. Mr. Bennett's seldom exceeded on one acre. Gen. Ringgold's, equal to any other crop on a large scale.

But I think the improvement of land, is of primary importance, and instead of giving so decided a preference for the improvement of live stock, some of which require, compared with our usual mode of treatment, very extraordinary keep; there ought to be simultaneous endeavours to effect both objects. Where grass has not been cultivated in sufficient quantity, roots can be substituted, until the grasses become more abundant; and if the society could offer liberal premiums for crops and live-stock, it would persuade many to deviate from the common practice; for if farmers can be convinced that by altering their plans, they can increase their substance, a general emulation will soon take place. For Gen. Beatson's system to the contrary notwithstanding, the foundation of lasting improvement, is cultivating grasses, and enlarging the manure heap.

I wish a plan could be devised to raise a fund sufficient to offer an inducement to the generality of farmers to risk some money, time and labour, to increase their crops, and rear fine animals. And among other premiums, not necessary to detail, to offer liberally for the best and most profitably cultivated farm in each county, having reference to the mode and expense of cultivation, the produce and improvement. For collecting and applying the largest quantity of stable and cow-yard manure; reference being had to circumstances, size of farm, number of stock, means of accumulation, quality, &c.: this premium to be extended to every county in the state. But it is not necessary to enter into details here; there will be a variety of opinions on those points, and if a sufficient fund can be provided, the officers of the society will be competent to make a judicious distribution.

My plan to raise a fund would be by annual or biennial lotteries, which I make no doubt the Legislature will authorise, as the rage for adventuring in lotteries, prevails to a considerable degree. I believe a scheme to raise annually, the sum of five thousand dollars, could be readily disposed of, for by putting the tickets at a low price, say not more than five dollars, it would be a popular lottery, and every farmer, or breeder, or grazier, or victualler, would be interested in its success, and, I believe it would be encouraged.

Five thousand dollars raised annually by lottery, added to the other funds of the society, would make a respectable sum for distribution, and would give a stimulous to agriculture, which would be a lasting benefit to the state.

I offer these hasty remarks with great deference; and if you disapprove of the plan, or think it impracticable, I do not wish you to publish them; but as you have been most instrumental in establishing the Society, and feel a deep interest in its usefulness, I know you will determine the case as will be most proper.

A.

SONG—Tune: Roy's Wife.

Fare thee well, for I must leave thee,
But, O, let not our parting grieve thee;
Happier days may yet be mine,
At least I wish them thine—believe me.

We part—but by those dew drops clear,
My love for thee will last for ever;
I leave thee; but thy image dear—
Thy tender smiles will leave me never.
Fare thee well, &c.

O dry those pearly tears that flow,
One farewell smile before we sever;
The only balm for parting wo
Is—fondly hope 'tis not for ever.
Fare thee well, &c.

Tho' dark and dreary low'rs the night,
Calm and serene may be the morrow;
The cup of pleasure ne'er shone bright
Without some mingling drops of sorrow.
Fare thee well, &c.

Scotsman.]

Leith, Sept. 12th, 1822.

* * *

Mr. Thomas Jeffreys, of Melksham, Wiltshire, gave a dinner on Tuesday, the 29th ult., to 22 of his neighbours, all residents in the aforesaid parish, whose ages together amounted to 2000 years. The hard winter, which began on Christmas Eve, 1789, was very familiar to many of the company, and some well remember the ice to have been more than one yard in thickness in many of the ponds in that vicinity.

THE FARMER.

BALTIMORE, FRIDAY, JANUARY 10, 1823.

COMPLETE SETS OF "THE AMERICAN FARMER."

We have it now in our power to supply Agriculturists and others with this Work from its commencement; the two first volumes having been carefully revised and reprinted. The whole embraces a great body of information, supplied by intelligent, practical farmers, graziers and planters of our own country; or drawn from celebrated foreign publications—and, to every subject treated of, reference is made easy, by copious Indexes to each volume.

"The American Farmer" boasts not only the pecuniary patronage, but the intellectual support of very many of the best Farmers, Planters and men of Science of the United States.—They have made it an acceptable and useful publication, to every cultivator of the soil; one which every farmer may advantageously put into the hands of his children, who are to be the companions of his age, and the owners of his estate, which they will enjoy or waste, as he may have instructed them how best to improve their faculties and inheritance, or have neglected these important duties. How long will parents occupy themselves in amassing property for their families, without teaching their children to improve, employ and enjoy it? The future owners of the soil are often left almost entirely ignorant of the ordinary methods of cultivation. The inevitable consequence is, that their estates become burthens, frequently too heavy to be borne.

The object of our labors, and of those who contribute to give them value, is to aid the present cultivators, and give to the rising generation of Farmers and Planters, a spirit of inquiry and enterprize in their profession, to teach them to be justly proud of it, and each in his sphere to reflect credit on the pursuit, whilst he adds to the individual and aggregate comforts and enjoyments of society.

For the purpose of diffusing a more general knowledge of our work, Mr. William F. Redding, has been employed to journey through the southern states. He will establish agencies in the principal places by which we can more conveniently furnish bound volumes and receive payment even from regular subscribers. He has copies of the work with him for sale, at $5 per vol. neatly bound—he will also receive subscriptions and payments for us. Our friends and patrons will confer especial favors upon us by any assistance which they may give him, and any attention that may be shewn to him. The work, however, may be obtained of us as heretofore, by sending the money per mail, at the risk of the Editor.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $7 25—Howard st. Superfine, $6 87½—Wharf, do. 6 12½—Wheat, white, $1 35 to 1 40—Red do., $1 27 to 1 30—Rye, 70 to 72 cents—Corn, 60 to 63 cts.—Oats, 35 to 37½ cents—Beef, live cattle, $5 to $5 50 per cwt.—Beef, 8 cents per lb.—Bacon, round, 10 to 11 cts.—Pork $4 50 to 5 50 per c lb.—6 to 8 cts. per lb.—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Clover seed, $9 to 10—Timothy seed, 4½ to $5—Flax seed, 75 to 80 cts.—Whiskey, from the wagons, 32 to 34 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, none in market—Herrings, No. 1, $3 62½ per bbl.—No. 2, $3 37½—Fine salt 80 to 90 cts. per bush.—Coarse, do. 75—Butter, 20 to 25 per lb.—Eggs, 25 cts. per doz.—Turkeys, $1 25—Geese, 28 to 37½ cts.—Chickens, $1 50 per doz.—Straw, $10 per ton—Hay, $17.

Maryland Tobacco—of the fine qualities, none in the market—Good Patuxent, $6 to 8, scarce—Inferior, $2 to 5, plenty and dull—seconds, $1 25 to 5—Very little doing in the market.

AGENTS FOR THE AMERICAN FARMER.

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THE AMERICAN GARDENER.

CHAPTER III.

On Propagation and Cultivation in general.

SOWING.

155. The first thing, relating to *sowing*, is, the preparation of the ground. It may be more or less *fine* according to the sort of seed to be sown. Peas and beans do not, of course, require the earth so fine as small seeds do. But, still, the finer the better for *every thing*; for, it is best if the seed be actually *pressed* by the earth in every part; and many seeds, if not all, are best situated when the earth is *trodden down* upon them.

156. Of course the ground should be *good*, either in itself or made good by manure of some sort, and, on the subject of manure, see Paragraphs 28 and 29. But, in *all cases*, the ground should be *fresh*; that is to say, it should be *dug* just before the act of sowing, in order that the seeds may have the full benefit of the *fermentation*, that takes place upon every moving of the earth.

157. Never sow when the ground is *wet*; nor, indeed, if it can be avoided, perform any other act with, or on, the ground of a garden. If you dig ground in wet weather, you make a sort of *mortar* of it: it *binds* when the sun or wind dries it. The fermentation does not take place: and it becomes unfavourable to vegetation, especially if the ground be, in the smallest degree, stiff in its nature. It is even desirable, that wet should not come for some days after ground has been moved; for, if the wet come before the ground be *dry at top*, the earth will *run together*, and will become bound at top. Sow, therefore, if possible, in dry weather, but in freshly-moved ground.

158. The *season* for sowing will, of course, find a place under the names of the respective plants; and, I do hope, that it is, when I am addressing myself to Americans, unnecessary for me to say, that sowing according to the *Moon* is wholly absurd and ridiculous, and that it arose solely out of the circumstance, that our forefathers, who could not read, had neither Almanack nor Calendar to guide them, and who counted by Moons and Festivals instead of by Months and Days of Months.

159. However, it is necessary to observe, that some, and even many, things, which are usually sown in the Spring, would be better *sown in the fall;* and especially when we consider how *little time* there is for doing all things in the spring. Parsnips, carrots, beets, onions, and many other things, may be safely sown in the fall. The seed will not perish, if covered by the earth. But, then, care must be taken to sow early enough in the fall for the plants to *come up* before the frost set in. The seed of all plants will lie safe in this way all the winter, though the frost penetrate to the distance of three feet beneath them, except the seeds of such plants *as a slight frost will cut down.* The seed of kidney beans, for instance, will *rot*, if the ground be not warm enough to *bring it up*. So will the seed of cucumbers, melons, and Indian Corn, unless buried beyond the reach of the influence of the atmosphere. Even early peas would be best sown in the fall, could you have an insurance against *mice*. We all know, what a bustle there is to get in *early peas*. If they were sown in the fall, they would start up the moment the frost were out of the ground, and would be ten days earlier in bearing in spite of every effort made by the spring sowers to make their peas overtake them. Upon a spot, where I saved peas for seed, last year, some that was left, in a lock of haulm, at the harvesting, and that lay upon the dry ground, till the land was ploughed late in November, came up, in the spring, the moment the frost was out of the ground, and they were in bloom full *fifteen days* earlier than those, sown in the same field as early as possible in the spring. Doubtless, they would have borne peas fifteen days sooner; but there were but a very few of them, and those standing straggling about; and I was obliged to plough up the ground where they were growing. In some cases it would be a good way, to cover the sown ground with *litter*, or with leaves of trees, as soon as the frost has fairly set in; but not before; for, if you do it before, the seed may vegetate, and then may be killed by the frost. One object of this fall-sowing, is, to get the work done ready for spring; for, at that season, you have so many things to do at once! Besides you cannot sow the instant the frost breaks up; for the ground is wet and clammy, unfit to be dug or touched or trodden upon. So that here are ten days lost. But, the seed, which has lain in the ground all the winter, is ready to start the moment the earth is clear of the winter frost, and it is *up* by the time you can get other seed into the ground in a good state. Fall-sowing of seeds to *come up* in the spring is not practised in England, though they there are always desirous to get their things early. The reason is, the uncertainty of their winter, which passes, sometimes with hardly any frost at all; and which, at other times, is severe enough to freeze the Thames over. It is sometimes mild till February, and then severe. Sometimes it begins with severity and ends with mildness. So that, nine times out of ten, their seed would *come up* and the plants would be destroyed before spring. Besides they have *slugs* that come out in mild weather, and eat small plants up in the winter. Other insects and reptiles do the like. From these obstacles the American gardener is free. His winter *sets in*; and the earth is safely closed up against vegetation till the spring. I am speaking of the North of Virginia, to be sure; but the gardener to the south will adapt the observations to his climate, as far as they relate to it.

160. As to the *act of sowing*, the distances and depths differ with different plants, and these will, of course be pointed out under the names of those different plants; but, one thing is common to all seeds; and that is, that they should be sown in *rows* or *drills;* for, unless they be sown in this way, all is *uncertainty*. The distribution of the seed is unequal; the covering is of unequal depth; and, when the plants come up in company with the weeds, the difficulty of ridding the ground of the latter, without destroying the former, is very great indeed, and attended with *ten times* the labour. Plants, in their earliest state, generally require to be *thinned;* which cannot be done with regularity, unless they stand in rows; and, as to every future operation, how easy is the labour in the one case and how hard in the other! It is of great advantage to almost all plants to move the ground somewhat deep while they are growing; but, how is this to be done, unless they stand in rows? If they be dispersed promiscuously over the ground, to perform this operation is next to impossible.

161. The great obstacle to the following of a method so obviously advantageous, is, the *trouble*. To draw lines for peas and beans is not deemed troublesome; but, to do this for raddishes, onions, carrots, lettuces, beds of cabbages, and other small seeds, is regarded as *tedious*. When we consider the *saving of trouble afterwards*, this trouble is really nothing, even if the drills were drawn one at a time by a line or rule; but, this need not be the case; for, a very cheap and simple tool does the business with as much quickness as sowing at random.

162. Suppose there be a bed of *onions* to be sown. I make my drills in this way. I have what I call a *Driller*, which is a *rake* six feet long in the head. This head is made of White Oak, 2 inches by 2½; and has *teeth* in it at *eight inches* asunder, each tooth being about six inches long, and an inch in diameter at the head, and is pointed a little at the end that meets the ground. This gives *nine* teeth, there being four inches over at each end of the head. In this head, there is a handle fixed of about six feet long. When my ground is prepared, raked nice and smooth, and cleaned from stones and clods, I begin at the left hand end of the bed, and draw across it *nine rows at once*. I then proceed, taking care to keep the left hand tooth of the Driller in the right hand drill that has just been made; so that now I make but *eight new drills*, because (for a guide) the left hand tooth goes this time in the drill, which was before made by the right hand tooth. Thus, at every draw, I make *eight drills*. And, in this way a pretty long bed is formed into nice, straight drills in a very few minutes. The sowing, after this, is done with *truth*, and the depth of the covering must be alike for all the seeds. If it be Parsnips or Carrots, which require a wider distance between the rows; or, Cabbage plants, which, as they are to stand only for a while, do not require distances so wide: in these cases, other Drillers may be made. And, what is the expense? There is scarcely an American farmer, who would not make a set of Drillers, for six-inch, eight inch, and twelve-inch distances, in a winter's day; and, consisting of a *White Oak* head and handle, and of *Locust* teeth, every body knows that the tools might descend from father to son, to the fourth or fifth generation. I hope, therefore, that no one will, on the score of *tediousness*, object to the drilling of seeds in a garden.

163. In the case of *large pieces of ground*, a hand Driller is not sufficient. Yet, if the land be *ploughed*, furrows might make the paths, the harrow might smooth the ground, and the hand-driller might be used for onions, or for any thing else. However, what I have done for *Kidney Beans* is this. I have a roller drawn by an ox, or a horse. The roller is about eight inches in diameter, and ten feet long. To that part of the frame of the roller, which projects, or hangs over beyond the roller behind, I attach, by means of two *pieces of wood* and *two pins*, a *bar* ten feet long. Into this bar I put *ten teeth;* and near the middle of the bar two handles. The roller being put in motion *breaks all the clods* that the harrow has left, draws after it the *ten teeth*, and the ten teeth make *ten drills*, as deep, or as shallow, as the man chooses who follows the roller, holding the two handles of the *bar*. The two pieces of wood, which connect the bar with the hinder projecting part of the frame of the roller, *work on the pins*, so as to let the bar up and down, as occasion may require; and, of course, while the roller is turning, at the end, the bar, with the teeth in it, is raised from the ground.

164. Thus are ten drills made by an ox, in about *five minutes*, which would perhaps require a man more than a day to make with a hoe. In short, an ox, or a horse, and a man and a boy, will do twelve acres in a day with ease. And to draw the drills *with a hoe* would require *forty-eight* men at the least; for, there is the *line* to be at work as well as the hoe. Wheat and even Peas are, in the fields, drilled by machines; but *beans* cannot, and especially *kidney beans*. Drills must be made: and, where they are cultivated on a large scale, how tedious and expensive must be the operation to make the drills, by line and hoe! When the drills are made, the beans are laid in at proper distances, then covered with a light harrow *(frame of White-Oak* and *tines* of *Locust,)* and after all comes the roller, with the teeth lifted up of course; and all is smooth and neat. The expense of such an apparatus is really nothing. The *barrel* of the roller, and the teeth-

bar, ought to be *Locust*, which never perishes, and the shafts and frame of White-Oak, which even without paint, will last a life time.

165. In order to render the march of the ox straight, my ground was ploughed into *lands*, one of which took the ten rows of kidney-beans; so that the ox had only to be kept straight along upon the middle of the land. And, in order to have the lands *flat*, not *arched* at all, the ground was ploughed twice in this shape, which brought the middle of the lands where the furrows were before. If, however, the ground had been flat-ploughed, without any furrow, there would have been no difficulty. I should have started on a straight side, or on the straightest side, leaving out any crook or angle that there might have been. I should have taken two distant objects, found, or placed, beyond the end of the work, and should have directed the head of the ox in a line with those two objects. Before I started, I should have measured off the width to find where the ox ought to come to again, and then have fixed two objects to direct his coming back. I should have done this at each end, till the piece had been finished.

166. But, is there no *other use*, to which this roller could be put? Have I not seen, in the *marking* of a corn-field, a man (nay the farmer himself) mounted upon a horse, which dragged a *log of wood* after it, in order to indicate the lines upon which the corn was to be planted? And have I not, at other times, seen the farmer making these marks, one at a time, with a *plough?* And have I not seen the beauty of these most beautiful scenes of vegetation marred by the crookedness of the lines thus drawn? Now, take my roller, take all the teeth out but *three*, let these three be at four feet apart. *Begin well* on one side of the field; mount your horse; load the teeth well with a stone tied on each; drop the bar; take *two objects* in your eye; go on, keep the two objects in line, and you draw *three lines at once*, all straight and parallel, even if a mile long. Then, turn, and carefully fix the horse again, so that you leave four feet between the outside line drawn before and the inside tooth. You have already measured at the other end (where you started,) and have placed two objects for your guide. Go on, keeping these objects in a line; and you have *three more lines*. Thus you proceed till the field be finished. Here is a great saving of *time;* but, were it for nothing but the *look*, ought not the *log* to give place to the roller?

167. If I have strayed here out of the garden into the field, let it be recollected, that I write principally for the use of *farmers*. I now return to garden-sowing.

168. When the seeds are properly, and at suitable distances, placed in the drills, rake the ground, and, in all cases, *tread it with your feet*, unless it be *very moist*. Then rake it *slightly* again; for all seeds grow best when the earth is pressed closely about them. When the plants come up, thin them, keep them clear of weeds, and attend to the directions given under the names of the several plants.

TRANSPLANTING.

169. The *weather* for transplanting, whether of table vegetables, or of trees, is the same as that for *sowing*. If you do this work in *wet* weather, or, when the ground is wet, the work cannot be well done. It is no matter what the plant is, whether it be a cucumber plant, or an oak-tree. It has been observed, as to seeds, that they like the earth to *touch* them in every part, and to lie *close* about them. It is the same with *roots*. One half of the bad growth that we see in *orchards* arises from negligence in the *planting*: from tumbling the earth carelessly in upon the roots. The earth should be as *fine* as possible; for, if it be not, part of the roots will remain *untouched* by the earth. If ground be *wet*, it cannot be *fine*. And, if mixed wet, it will remain in a sort of mortar, and will cling and bind together, and will leave more or less of cracks, when it become dry.

170. If possible, therefore, transplant when the ground is not wet; but, here again, as in the case of sowing, let it be dug, or deeply moved, and well broken, immediately before you transplant into it. There is a *fermentation* that takes place immediately after moving, and a dew arises, which did not arise before. These greatly exceed, in power of causing the plant *to strike*, any thing to be obtained by rain on the plants at the time of planting, or by planting in wet earth. Cabbages and Ruta Raga (or Swedish Turnip) I have proved, in innumerable instances, will, if planted in freshly-moved earth, under a burning sun, be a great deal finer than those planted in wet ground, or during rain. The causes are explained in the foregoing paragraph; and, there never was a greater, though most popular error, than that of *waiting for a shower* in order to set about the work of transplanting. In all the books, that I have read, without a single exception: in the English Gardening books; in the English Farmer's Dictionary, and many other works on English husbandry; in the Encyclopedia; in short, in *all* the books on husbandry and on gardening that I have ever read, English or French, this transplanting in *showery weather* is recommended.

171. If you transplant in hot weather, the *leaves* of the plants will be scorched; but the hearts will live; and the heat, assisting the fermentation, will produce new roots in twenty-four hours, and new leaves in a few days. *Then* it is that you see fine vegetation come on. If you plant in *wet*, that wet must be followed by *dry;* the earth, from being moved in wet, contracts the *mortary* nature; hardens first, and then cracks; and the plants will stand in a stunted state, till the ground be moved about them *in dry weather*. If I could have my wish in the planting of a piece of Cabbages, Ruta Baga, Lettuces, or, almost any thing, I would find the ground perfectly dry at top; I would have it dug deeply; plant immediately; and have no rain for three or four days. I would prefer no rain for a month to rain at the time of planting.

172. This is a matter of primary importance. How many crops are lost by the *waiting for a shower!* And, when the shower comes, the ground is either *not dug*, or it has been dug for some time, and the benefit of the fermentation is wholly lost.

173. However, there are some very tender plants; plants so soft and *juicy* as to be absolutely burnt up and totally destroyed, stems and all, in a hot sun, in a few hours. Cucumbers and Melons, for instance, and some plants of flowers. These, which lie in a small compass, must be *shaded* at least, if not watered, upon their removal; a more particular notice of which will be taken as we proceed in the Lists of the Plants.

174. In the *act* of transplanting the main things are to take care not to *bury the heart* of the plant; and to take care that the earth be well pressed about the *point of the root* of the plant. To press the earth very closely about the *stem* of the plant is of little use, if you leave the *point* of the root loose. I beg that this may be borne in mind; for the growth, and even the life, of the plant depend on great care as to this particular. See *Cabbage*, Paragraph 200, for a minute description of the *act* of planting.

175. As to propagation by cuttings, slips, layers and offsets, it will be spoken of under the names of the several plants usually propagated in any of those ways. *Cuttings* are pieces cut off from branches of trees and plants. *Slips* are branches pulled off and slipped down at a joint. *Layers* are branches left on the plant or tree, and bent down to the ground, and fastened, with earth laid upon the part between the plant and the top of the branch. *Offsets* are parts of the root and plant separated from the main root.

CULTIVATION.

176. Here, as in the foregoing parts of this Chapter, I propose to speak only of what is of *general* application, in order to save the room that would be necessary to repeat instructions for cultivation under the names of the several plants.

177. The ground being good, and the sowing, or planting, having been properly performed, the next thing is the *after-management*, which is usually called the *cultivation*.

178. If the subject be from *seed*, the first thing is to see that the plants stand at a proper distance from each other; because, if left too close, they cannot come to good. Let them also be thinned early; for, even while in seed-leaf, they injure each other. Carrots, parsnips, lettuces, every thing, ought to be thinned in the seed-leaf.

179. Hoe, or weed, immediately; and, let me observe here, once for all, that weeds never ought to be suffered to get to any size either in field or garden, and especially in the latter. In England, where it rains, or drips, sometimes, for a month together, it is impossible to prevent weeds from growing. But in this fine climate, under this blessed sun, who never absents himself for more than about forty-eight hours at a time, and who will scorch a dock-root, or a dandelion root, to *death* in a day, and lengthen a water-melon shoot 24 inches in as many hours: in this climate, scandalous indeed it is to see the garden, or the field, infested with weeds.

180. But, besides the act of killing weeds, *cultivation* means *moving the earth* between the plants while growing. This assists them in their growth: it feeds them: it raises food for their roots to live upon. A mere *flat*-hoeing does nothing but keep down the weeds. The hoeing when the plants are become stout, should be deep; and, in general, with a hoe that has *spanes* instead of a mere flat plate. In short, a sort of *prong* in the *posture* of a hoe. And the spane of this prong-hoe may be longer, or shorter, according to the nature of the crop to be hoed. *Deep-hoeing* is enough in some cases; but, in others, *digging* is necessary to produce a fine and full crop. If any body will have a piece of Cabbages, and will dig between the rows of one half of them, twice during their growth, and let the other half of the piece have nothing but a flat-hoeing, that person will find that the half which has been digged between, will, when the crop is ripe, weigh nearly, if not quite, twice as much as the other half. But, why need this be said in an Indian Corn country, where it is so well known, that, without being *ploughed* between, the corn will produce next to nothing?

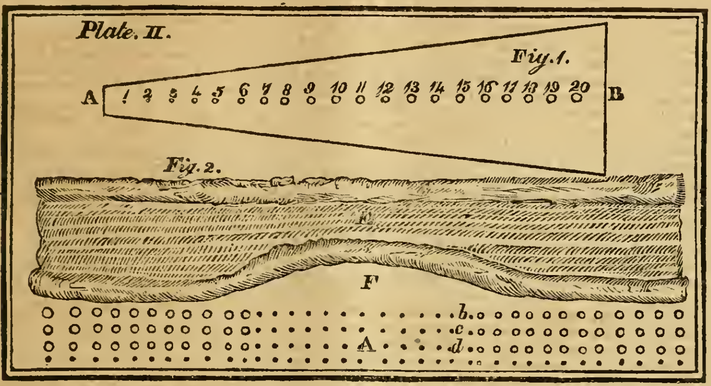
181. It may appear, that, to dig thus amongst growing plants is to cut off, or tear off, their roots, of which the ground is full. This is really the case, and this does great good; for the roots, thus cut asunder, shoot again from the plant side, find new food, and send, instantly, fresh vigour to the plant. The effect of this tillage is quite surprising. We are hardly aware of its power in producing vegetation; and we are still less aware of the distance, to which the roots of plants extend in every direction.

182. Mr. Tull, the father of the drill-husbandry, gives the following account of the manner, in which he discovered the distance to which certain roots extend. I should observe here, that he

was led to think of the drilling of crops in the fields of England, from having, when in France, observed the effects of inter-tillage on the vines, in the vineyards. If he had visited America instead of France, he would have seen the effects of that tillage, in a still more striking light, on plants, in your Indian Corn fields; for, he would have seen these plants spindling, yellow, actually perishing, to-day, for want of *ploughing;* and, in four days after a good, deep, clean and careful ploughing, especially in *hot* weather, he would have seen them wholly change their colour, become of a bright and beautiful green, bending their leaves over the intervals, and growing at the rate of four inches in the twenty-four hours.

183. The passage, to which I have alluded, is of so interesting a nature, and relates to a matter of so much importance, that I shall insert it entire, and also the *plates* made use of by Mr. Tull to illustrate his meaning. I shall not, as so many others have, take the thoughts, and send them forth as my own; nor, like Mr. John Christian Curwen, steal them from Tull, and give them, with all the honour belonging to them, to *a Bishop.*

184. "*A Method how to find the distance to which roots extended horizontally.* A piece, or plot dug and made fine, in *whole hard ground,* as in *Plate* II. *Fig.* 1.



"The end A. 2 feet, the end B. 12 feet, the length of the piece 20 yards; the figures in the middle of it are 20 Turnips, sown early and well hoed. The manner of this hoeing must be, at first, near the plants, with a spade, and each time afterwards, a foot distance, till the earth be once well dug; and, if weeds appear where it has been so dug, hoe them out shallow with the hand-hoe. But, dig all the piece next the out-lines deep every time, that it may be the finer for the roots to enter, when they are permitted to come thither. If the Turnips be all bigger, as they stand nearer to the end B, it is a proof they all extend to the outside of the piece, and the *Turnip* 20, will appear to draw nourishment from six foot distance from its centre. But if the *Turnips* 16, 17, 18, 19, 20, acquire no greater bulk than the *Turnip* 15, it will be clear, that their *roots* extend no farther than those of the *Turnip* 15 does; which is but about 4 foot. By this method the distance of the extent of *roots* of any plant, may be discovered.—There is also another way to find the length of *roots,* by making a long narrow trench, at the distance you expect they will extend to, and fill it with salt; if the plant be killed by the salt, it is certain that some of the roots enter it.

185. "What put me upon trying this method was an observation of two lands, or ridges (See *Plate* II. *Fig.* 2.) drilled with *Turnips* in rows, a foot asunder, and very even in them; the ground, at both ends and one side, was hard and unploughed. The *Turnips* not being hoed were very poor, small, and yellow, except the three outside rows, *b c d* which stood next to the land (or Ridge) *E,* which land, being ploughed and harrowed, at the time the land A ought to have been hoed, gave a dark flourishing colour to these three rows; and the Turnips in the row *d,* which stood farthest off from the new ploughed land *E,* received so much benefit from it, as to grow twice as big as any of the more distant rows. The row *c* being a foot nearer to the new ploughed land, became twice as large as those in *d,* but the row *b,* which was next to the land *E,* grew much larger yet. *F* is a piece of hard whole ground, of about two perch in length, and about two or three foot broad, lying betwixt those two lands, which had not been ploughed that year; it was remarkable that, during the length of this interjacent hard ground, the rows *b c d* were as small and yellow as any in the land. The *Turnips* in the row *d,* about three foot distant from the land *E,* receiving a double increase, proves they had as much nourishment from the land *E* as from the land A, wherein they stood, which nourishment was brought by less than half the number of *roots* of each of these *Turnips.* In their own land they must have extended a yard all round, else they could not have reached the land *E,* wherein it is probable these few roots went more than another yard, to give each Turnip as much increase as all the roots had done in their own land. Except that it will hereafter appear, that the new nourishment taken at the extremities of the roots in the land *E,* might enable the plants to send out more new roots in their own land, and receive something more from thence. The row *c* being twice as big as the row *d,* must be supposed to extend twice as far; and the row *b,* four times as far, in proportion as it was of a bulk quadruple to the row *d.*"

186. Thus, then, it is clear, that tillage amongst growing plants is a great thing. Not only is it of great benefit to the plants; not only does it greatly augment the amount of the Crop, and make it of the best quality; but, it prepares the ground for another crop. If a *summer fallow* be good for the land, here is a summer fallow; if the ploughing between Indian Corn *prepares the the land for wheat,* the digging between cabbages and other crops will, of course prepare the land for succeeding crops.

187. *Watering plants,* though so strongly recommended in English Gardening Books; and so much in practice, is a thing of very doubtful utility in any case, and, in most cases, of positive injury. A country often endures present suffering from long drought; but, even if all the gardens and all the fields could, in such a case, be watered with a watering pot, I much question, whether it would be beneficial even to the crops of the dry season itself. It is not, observe, *rain* water that you can, one time out of a thousand, water with. And, to *nourish plants,* the water must be prepared in clouds and mists and dews. Observe this. Besides, when rain comes, the earth is *prepared* for it by that state of the air, which precedes rain, and which makes all things *damp* and *slackens* and loosens the earth, and disposes the roots and leaves for the reception of the rain. To pour water, therefore, upon plants, or upon the ground where they are growing, or where seeds are sown, is never of much use, and is generally mischievous; for, the air is dry; the sun comes immediately and bakes the ground, and vegetation is checked, rather than advanced, by the operation. The best protector against frequent drought is frequent *digging,* or, in the fields, *ploughing,* and always *deep.* Hence will arise a *fermentation* and *dews.* The ground will have *moisture* in it, in spite of all drought, which the hard, unmoved ground will not. But always dig or plough in *dry weather,* and, the drier the weather, the deeper you ought to go, and the finer you ought to break the earth. When plants are *covered* by *lights,* or are in a *house,* or are covered with cloths in the night time, they may need *watering,* and in such cases, must have it given them by hand.

188. I shall conclude this Chapter with observing on what I deem a vulgar error, and an error, too, which sometimes produces inconvenience. It is believed, and stated, that the ground *grows tired,* in time, of the *same sort of plant;* and that, if it be, year after year, cropped with the same sort of plant, the produce will be small, and the quality inferior to what it was at first. Mr. Tull has most satisfactorily *proved,* both by fact and argument, that this is not true. And I will add this fact, that Mr. Missing, a Barrister, living in the Parish of Tichfield, in Hampshire, in England, and who was a most excellent and kind neighbour of mine, has a border under a south wall, on which he and his father before him have grown *early peas,* every year, for *more than forty years;* and, if, at any time, they had been finer than they were every one year of the four or five years that I saw them, they must have been something very extraordinary; for, in those years (the last four or five of the more than forty) they were as fine, and as full bearing, as any that I ever saw in England.

189. Before I entirely quitted the subject of *Cultivation,* there would be a few remarks to be made upon the means of preventing the depredations of *vermin,* some of which make their attacks on the *seed,* others on the *roots,* others on the *stem,* others on the *leaves and blossoms,* and others on the *fruit;* but, as I shall have to be very particular on this subject in speaking of *fruits,* I defer it till I come to the Chapter on Fruits.

190. Having now treated of the Situation, Soil, Fencing, and Laying out of gardens; on the making and managing of Hot-Beds and Green-Hous-

es; and having given some directions as to propagation and cultivation in general, I next proceed to give Alphabetical Lists of the several sorts of plants, and to speak of the proper treatment for each, under the three heads, *Vegetables* and *Herbs; Fruits;* and *Flowers.*

(To be Continued.)

PAPERS COMMUNICATED FOR PUBLICATION IN THE AMERICAN FARMER, BY ORDER OF THE UNITED AGRICULTURAL SOCIETIES OF VIRGINIA.

No. 4.

Report on AGRICULTURAL PREMIUMS,

(Submitted to the Delegation, and approved December 6th, 1822.*)*

The committee instructed by the delegation "to inquire into the subject of premiums for the "improvement of Agriculture, the advantages "and disadvantages which have been found to "attend them, and the course which may be "deemed expedient for the Delegation to pursue, for the purpose of fulfilling that part of "their duties as enjoined by the constitution"—Report as follows:—

It has been almost universally the plan of Agricultural Societies, to devote a large proportion of their funds to premiums for such practices as they considered improvements in agriculture.—From the general concurrence in this course, it must be inferred, that such societies consider the premiums which they offer, as their best, if not their only means for promoting the improvement and extension of agricultural science. We venture to dissent from this received opinion, and though fully impressed with the benefits which might be derived from premiums judiciously bestowed, we feel satisfied that the usual practice is productive of but little good, and perhaps of more evil than good, to the objects which they were intended to promote.

Premiums can only be offered for practices of three kinds, viz:—1st. Those which are known to be profitable—2d. Those which are known to be unprofitable—and 3d. Practices of which the profits are doubtful or uncertain. It is so evident as to require no proof, that premiums of the first kind must always be useless. As general propositions, every farmer knows that it is most profitable to enrich his fields, to till them well, to use good utensils, and to keep his live-stock in good condition. Yet want of capital, care, or industry, causes many of them to continue in the opposite courses—to use insufficient or exhausting tillage, bad utensils and half starved teams. But as much as improvement in this respect is wanting, none could be produced by premiums. Profit is the farmer's great object, and if that itself does not improve his practice, nothing else can. If the reasonable expectation of doubling his crops, has no effect in inducing him to adopt a better system, it is idle to expect any such exertion from the offer of a 20 dollar premium.

The greater number of premiums offered are of the second class, and are as clearly hurtful as the preceding are useless. A reference to the list of premiums offered by societies, will shew that much the greater number are for practices, which, so far from being profitable, would insure a loss to every one who gained or contended for them. Such are the premiums for the most productive acre of corn, wheat, rye, potatoes, &c. the finest (*i. e.* the fattest) ox, cow, sheep, hog, &c. To obtain these premiums, enormous crops have been raised on many single acres, and beasts have been brought to a degree of fatness, which no consideration of market price, or *nett profit* would ever have induced, or will ever cause others to imitate. It is doubtful whether in China or Flanders, the best cultivated and most populous parts of the world, it can ever be profitable to bestow so much labour and manure, as to raise every acre to the maximum of production. In the United States, where land is so cheap and labour so high, the least reflection will shew such a course to be folly in the extreme. The certain effects of these wonderful *improvements* in agriculture, prevent the example being followed, and fortunately, the loss is confined to the few who make a single effort merely to obtain a premium. He who succeeds best in a losing business, has not thereby benefitted himself or his neighbours; and universal ruin would ensue, could the Societies extend the practices which they thus recommend, to every acre and all the fattened stock in the country.

The Agricultural Societies of the northern states stand foremost, both in activity and success in distributing premiums of this kind; and we are more particularly called on to notice them, because their example has more than once been held out to us for imitation. Several numbers on the "Northern Cattle Shows, &c." (which we believe were written by a gentleman who is certainly an able and zealous, though in this and some other things, a mistaken friend to Agriculture,) were, for this purpose, published in the 2nd. vol. of the American Farmer. In our own justification, therefore, it is necessary to shew that we have not followed, because we do not approve the course thus recommended, and not because we are careless of the great objects of our association.

Though we freely object to the direction of these premiums, we admire and fully estimate the zeal which prompted them in our sister societies of the north. We also readily acknowledge that their Cattle Shows and Fairs were attended with collateral benefits, well worthy the attention of other Societies. By thus instituting annual agricultural festivals, the societies were made more important, their meetings interesting and therefore well attended, and many who were attracted only by parade and merriment, were drawn to the support of the zealous and sedate friends of agriculture. By these means, much activity and zeal were suddenly excited, which we should sincerely regret to see evaporate in producing a few fat beeves and rich acres, without being at all directed to the real improvement of agriculture. When the utter uselessness of such premiums is seen, as it soon must be, we fear that the zeal which they excited will subside, instead of being turned into a proper channel.

The recommendation by means of premiums, of practices, which, in themselves are injudicious and unprofitable, is by no means confined to the societies of the northern states. We have seen no list of premiums in the southern states, entirely exempt from this fault. Even the British Board of Agriculture is as liable to the charge as any association of inferior celebrity, as may be seen in the account of their last distribution of premiums. (See pages 147, 8, and 9, 3d vol. of the American Farmer.) Nine bulls of the Short Horned breed were exhibited, and the premium for the finest was awarded to one weighing 2465 lbs. which was admitted to be "too fat to *serve*" in his vocation, or we presume for any other purpose, unless for the tallow chandler and soap boiler. An English newspaper, not long since, mentioned another society having conferred their gold medal on some person, who had planted the greatest number of acorns: yet if oaks were more profitable than grain or live-stock, there is no doubt that a premium would not be required for the culture—and if not, the individual obtained a premium for planting the least profitable crop.

So far as premiums of the second class (or those for unprofitable practices) have influence on agriculture, their effects are injurious; and the best apology which can be made for them, is, that their influence is extremely limited.—That they cannot even indirectly produce the least benefit, is taught by reason, and confirmed by experience. Within the space of two years, in New York, $20,000 was furnished from the State Treasury, in addition to the contributions of their numerous Agricultural Societies, and devoted to premiums. No where have they produced so many competitors, or greater exertions for success. Had the plan really tended to extend agricultural knowledge, we might have expected as fruits, from so many societies, a mass of agricultural papers. Yet we have lately seen published, a circular letter from the Board of Agriculture, which draws together all the correspondence of the societies, requesting from private individuals, such communications as may enable the Board to print a volume. We mean to cast no reflection on the farmers who compose these societies; we doubt not their ability to have supplied the deficiency, which the circular letter admits to exist. We see too much of this deplorable inertness in our own members to be surprised at the same fault in others. Nor do we mention these facts in triumph, nor with the view of affecting a superiority, to which, in this respect, we have no pretensions. We review the course of our respected fellow labourers to shew, that all the stimulus, afforded by their premiums, has not at all advanced their knowledge of agriculture, nor in any way promoted its interest or improvement.

Though our opinions would tend greatly to limit the range of premiums, there still remain enough objects, for which they would be highly useful. All these will be found in what we have called the third class, *i. e.* practices, of which the actual or comparative profits are doubtful, or disputed; and which, therefore, are proper subjects for investigation by experiments. But premiums are as often thrown away on this class as on the other two. This must be the case, whenever a premium is given for obtaining some specified result, as for example, for the heaviest crop of woad or madder, instead of for making such experiments as would shew the degree of profit, or loss, attending those new crops. Many of the premiums usually given are of this class, and courtesy requires that all should be considered as such, according to the opinions of the societies conferring them; for nothing could be more absurd than proposing premiums for practices, which they themselves knew to be unprofitable. Premiums may produce fine acres of wheat in Massachusetts, or of clover in Lower Virginia, and yet leave the profit or loss as uncertain as before.

Accurate experiments on any doubtful points are always valuable to agriculturists in general, but in far the greater number of cases, cause loss to their conductor. Hence the peculiar propriety of encouraging experiments by premiums. An agricultural experimenter may, possibly, by some fortunate discovery, compensate himself for his previous losses; but such good fortune is rare, and most persons, who in this way have rendered signal services to farmers, have done so by great individual sacrifices. This great obstacle is not the only one which opposes the correct method of investigation, and the advancement of the science of agriculture. Notwithstanding the certain attendant loss, every zealous farmer is, to some extent, an experimenter. But the results of his experiments are not known except to himself, and even to him many appear useless, which if compared with those of others, would lead to important consequences. To prove by experiment that a doubtful practice is wrong, would be as valuable to agriculture, as if the result should shew that it is right : but on many such points, proof has perhaps been obtained fifty different times, by as many farmers having no communication with each other, and still the results may be unknown to all but the several experimenters. Premiums for experiments, conducted with care and accuracy, and repeated under different circumstances, until the point in question was clearly settled, could not fail greatly to promote the improvement of agriculture.—The advantage derived would not be inconsiderable, even if such premiums had merely the effect of giving publicity to the numerous experiments which are made with other views, and which would otherwise never be known—But we can scarcely doubt that their number could be greatly increased, be directed to the most important objects, and conducted with far more care and attention, when, in addition to the hope of being honoured with a premium, the experimenter would expect to profit by the labours of many others, engaged in similar researches.

Agriculture remains in the same situation in which formerly all sciences were, that required experiment for their proper investigation. From the time of Aristotle to that of Lord Bacon, philosophy made scarcely any progress. During this long period, every philosopher who reached celebrity, distinguished himself by producing some baseless hypothesis, which was received as true until overthrown by one more plausible, but which was alike destined to yield in its turn. The profound Bacon first pointed out the tedious, but sure road to escape from this labyrinth of error, and Newton by pursuing that course, and testing every proposition by experiment, was enabled to go farther than all his predecessors. Since then, the old mode of theorising has given way to actual experiment, in every branch of knowledge to which it was applicable, except agriculture, the most important of all ; and it is therefore not surprising that agriculture has remained almost stationary, while other sciences have advanced with such rapidity, as scarcely to allow the world to mark their progress. Agriculturists alone continue to grope through theories, unfounded opinions and prejudices. Some one proposes a new theory or system of cultivation—every speculative farmer immediately becomes its advocate or opponent—volumes may be written for and against, and perhaps a century spent before it is decided whether the opinion was right or wrong. Such is the course we regularly pursue ; and as in every contested point, one party must be wrong, and in consequence, pursue an unprofitable practice, the loss of money, labour and time may exceed a hundred times the cost of all the experiments necessary to remove the difficulty. They who lose most by this improper course, are always the last to see the want of a guide more sure than theory. Farmers are generally much too easy of belief ; they take sides with the feelings of partisans, and whether they support an antiquated prejudice, or the wildest modern hypothesis, are equally sure that they are right. As examples of the chance for success in this method of searching for truth, in England, the merits of Tull's Drill system is scarcely yet settled, and the war between the Fallowists and the Anti-Fallowists, will probably continue another thirty years. The advocates for rotted and unrotted manure, still contend in this country and in Europe, without appearing to approach a decision, and in this district we are as much divided in comparing the advantages of grazing and inclosing, natural and artificial, green and dry grass for improving the soil, and in estimating the value of every other kind of manure within our reach. Yet the knowledge which we seek can only be attained through experiment ; and all we now possess was derived from experiments, though mostly made by accident, and their results forced on our observation. To such chance discoveries, made at long intervals, and separated by errors and absurdities innumerable, we are indebted for almost every thing that deserves the name of agricultural knowledge.

When, in addition to the obstacles already mentioned, to experiments being made by separate individuals, urged only by zeal for research, we consider the time and labour, the unremitting attention and perfect accuracy required, the sacrifice is evidently too great to expect from any one unaided farmer. To fix beyond doubt the most inconsiderable fact, requires many experiments, to be made on different soils, in different seasons, and by different persons. When results are intended to be compared, the slightest difference in the process may sometimes make a false conclusion appear true. Hence all private experiments are made with so little care as to be scarcely satisfactory to their conductor, and of no value to other persons. Societies by premiums, may effect whatever in this respect is wanting. They can point out the most important subjects for experiments, require attention to every thing which can affect results, and unite the labours of many, for the attainment of a single object. The members of the society which shall commence this course, can in no other way, draw more honour on themselves, or render more benefit to agriculture. We are ignorant on so many points in husbandry, that the only difficulty would be in selecting subjects for experiments. However little might be done by a single society, yet every premium conferred would mark some progress towards true knowledge. We doubt whether as much could be said for every score of premiums heretofore bestowed.

Resolved by the Delegation of the United Agricultural Societies of Virginia, that a committee be appointed to prepare and report to the next General Meeting of Delegates, a list of such premiums as may be deemed expedient to be offered by the Delegation, which premiums shall conform generally to the opinions supported in the foregoing report. *And whereas*, several of the Societies belonging to this association, have already held ploughing matches, and have practically proved that much benefit may be derived from the continuation of this course,

Resolved, That the committee shall provide that one premium of the number to be offered by the Delegation, shall be annually conferred on the ploughman who shall gain the premium, or the highest of the several premiums, bestowed by one of the Societies; and this premium shall be thus given in rotation to as many of the Societies as may establish ploughing matches ; and at the time and place of bestowing this premium, all others granted by the Delegation shall be distributed.

[*Extract from the Minutes.*]
EDM. RUFFIN, Secretary.

DISEASES OF SHEEP.

As far as I have learnt, it has been but a few years since worms have been discovered to breed in the heads of sheep, though it is probable they have, from time immemorial. They are not only found in the heads of sheep but also in the deer of our forest.

I am fully satisfied that these grubs do more injury to the sheep of our country, than all the diseases with which they are afflicted, and we may add to this, all that are killed by dogs and wolves. I therefore consider that a true history of these worms, their manner of breeding, together with the best method of destroying them, will be important to the public, especially at this time, when our farmers are so generally turning their attention to the breeding of sheep and supplying our infant manufactories with wool.

1st. These grubs proceed from a large bee, which lays its eggs in the nostrils of sheep, the last of August and first of September, where they soon hatch, so that by the 20th of the month, you may discover in the cavity between the nostrils and the wind pipe, from 25 to 100 small white grubs, with black heads and a black streak on the back, and in June a black streak crosswise. They continue in this place till July and August, at which time they get their growth, and are as large as a pipe stem, and near an inch long, with four large teeth as hard as bone.—They then leave the sheep, and soon cast off their skin, when the bee appears, and is ready to lay a new parcel of eggs.

Symptoms.—The symptoms do not appear till towards spring, at which time they may be discovered, by sickly countenance and loss of flesh, notwithstanding all the grain and roots that can be given them ; sometimes running at the nose, (though not always,) and snorting as if trying to blow something from the head. In some instances they will suddenly spring about in a wild frantic manner, and drop down dead. When this last symptom takes place, the grubs have made a lodgment in the brain. When they do not die in this manner, the grubs make the sheep so poor that their wool stops growing, becomes loose and much of it falls before shearing, many of the lambs are lost, and those that live are stinted by reason of the ewes being poor and sickly, and consequently give little or no milk ; sometimes the sheep will linger along, pining away continually, and not die until June or July.

Remedy.—Take half a pound of good Scotch snuff, pour two quarts of boiling water on it, stir it and let it stand till cold, inject about a table spoonful of this liquid and sediment up each nostril of the sheep with a syringe. This must be repeated three or four times at proper intervals, from the middle of October to the first January ; the grubs are then small and are much easier destroyed than afterwards, and have not injured the sheep as they will, if deferred until later.—Half an ounce of assafœtida, pounded in a little water, and added to the snuff, will make it more effectual. The owner of the sheep need not be alarmed when the operation is performed, to see the sheep very drunk and apparently in the agonies of death, as they will in a few minutes recover. I never knew any bad effects to follow. Dry snuff may be blown up the nose with a quill, and have a good effect ; but it is a tedious dirty job. I have tried vinegar and blue dye with but little or no success.

The reason why it is necessary to perform the operation so often is, that in the heads of the sheep, there are many cavities, and a little above each nostril there is a thin substance wound up into four folds, the grubs get into these cavities and folds, where it is not common to reach them the first operation, but by repeating it three or four times, at proper intervals, they will crawl out and be all destroyed. The reason of my directing the sediment of the snuff to be injected, together with the decoction, is, the sediment is retained in the head longer that the liquid, which makes it more certain to prove effectual.

The above knowledge I have obtained from dissecting the heads of a number of sheep, in different seasons of the year, and making experiments on some before they were killed, and in this way I could discover exactly the effect of the different medicines.

If the above directions are strictly attended to with all the sheep of our country, more than a million of dollars would be saved in the United States yearly; as all sheep (in this part of the world at least) are infected with these vermin; if any person doubts it, let them examine sheep from the 20th of September to the first of June.

I have found that our sheep are sometimes afflicted with the consumption on the lungs.—Bucks that have been put to too great a number of ewes, without being well fed with corn or beans, a little before tuppying time, are most subject to this disorder.

Symptoms.—The eyes uncommonly bright and shining, water constantly running from them, and a gradual loss of flesh, they generally decline till the latter part of the winter and then die.—I lost a Buck last winter with the above symptoms, and on dissecting, I found every part natural except the lights, which were nearly all ulcerated.

Remedy.—Tar, or tar water is good, but after the disorder is fully seated, it is doubtful whether any thing will be of service.

Foot rot.—This disorder is occasioned by sheep going in wet pastures. There is an issue in the division of each hoof, a little above the hoof, some have erroneously supposed it to be a living worm. When the sheep stand long in water, it affects the issue of their feet, so that an inflammation takes place, and if they are not removed to a dry pasture the feet will rot off. Perhaps it would be better for those, whose land is low to take out those issues; which may be easily done, by putting the finger the under side of the foot and pressing upward, then with a sharp penknife cut through the skin around the mouth of the issue, and with a strong pair of tweesers it may be pulled out, the place will then heal and the sheep will not be liable to the rot in the foot, though they should run in wet pastures. But when the pastures are dry, which on the whole, is best for sheep, I think it not proper to pull out the issue; for this reason, the God of nature has made them thus, and undoubtedly for the benefit of the sheep, as much as the issue in the legs of hogs.

JNO. T. ADDOMS.

Plattsbugh, Oct. 10, 1822.

[*Northern Intelligencer.*

STATE OF AGRICULTURE IN THE ISLAND OF CUBA.

Extract from a letter received by a gentleman of Baltimore, dated

MATANZAS, 19th Nov. 1822.

"Dear Sir,—I have received the three vols. of "the American Farmer" and Mr. Eastman's Cylinder Straw Cutter; I find much information and entertainment in the former, and the latter was tried last week, when it performed to the satisfaction of several gentlemen, who were invited to see it. Although Cuba is a very old colony, we are, in many respects, a very new people; shut out as the Creoles have been, until very lately, from all communication with foreign countries, they have groped their way in the old beaten track of their forefathers; and n no respect is this more evident than in every thing connected with Agriculture. I verily believe that the plough now in use amongst the natives, has received no improvement since the time of discovery; it is the same described in the third volume of the Farmer, as the one used in Minorca. Nature has been so indulgent to us that the planter has little incitement to industry, but it is to be hoped that the example of the foreigners will gradually inspire emulation. I am a half enthusiast in these matters myself, and you cannot oblige me more, than in giving me any information respecting new inventions or discoveries. Please to put me down as a regular subscriber to Mr. Skinner's Work, and send it as the volumes are annually completed. I wish you to enquire whether there is any one competent to analyse soils, in your College*, in the manner recommended by Sir Humphrey Davy; it appears to be a very easy process. I also request you to procure me the "Laws and regulations relating to the Bank Turnpikes in Maryland." I have to beg your pardon for all this encroachment on your time, but can assure you I will be much gratified, in being called upon to send you, or your friends, any information from this Island, in return.

I remain, Dear Sir,
Your obedient servant,
J*** F*****.

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* *Dr. Elisha De Butts, Professor of Chemistry in the University of Maryland, is eminently capable of rendering this service to Agriculturists; and, whenever his usual engagements will permit him, we believe he would cheerfully make such investigations for them.*—ED. AM. FARMER.

Editorial Correspondence.

LATICAUDŒ or TUNISIAN BROADTAIL SHEEP, ARE EMPHATICALLY THE *FARMERS' SHEEP.*

Belmont, near Philad. Jan. 5th, 1823.

DEAR SIR,

I was mortified to perceive in a late "*American Farmer,*" that you had been unsuccessful in your pair of *Tunis Sheep;* which had neither answered your expectations as to their capacity to procreate, nor in the quality of the wool. These forbidding defects, especially the former, may tend to discourage our farmers in their endeavours to obtain and multiply this valuable race. Mr. Jefferson's account of *his* sheep, would corroborate the idea that your sheep were not singular. I should be sorry, indeed, that such opinions should prevail generally; although I cannot entertain any doubts of the facts you state, I must confidently repeat my former assertions, as to the generative and all other faculties of this race of the *Laticaudæ*, from my experience of and personal attention to them, for a period of fourteen years. I never had, or heard of, a similar failure in any of the sheep, whereof I have given an account in our second volume of Memoirs.—In my early life, I had a fine flock of English and other sheep—finer animals *of the kind*, I have never since seen. I spared no care nor expense in relation to them; and was *then* well acquainted with the qualities and modes of treatment of these valuable parts of our farm stock. I paid, at one time, a sum for four South-Downs, which, although trifling compared with modern prices, was accounted a most extravagant expenditure. I mention this circumstance, merely to shew my early and long acquaintance with the subject. I must confirm, without hesitation, all I have said, both as to the qualities of the Tunis Sheep, and the superiority of the wool. Many of my sheep bore fleeces not only far more abundant, but incomparably more valuable than those of the best *common* sheep. Some of the fleeces would bear two and some three cuts in the length of the wool. That next the pelt was *furry* and soft; so that I have had gloves and stockings made of it, equal to fleecy hosiery. I have had better cloth made of this wool, when judiciously selected, than I could obtain from that of common sheep, by many degrees. *Merinos* were then unknown. As to their prolific capacities, no doubt can be entertained, *provided* the right kind be procured. In this I may have been peculiarly lucky; yet I am satisfied that enough of the same class can be obtained, by careful and intelligent persons. Where are there any other breeders which would produce a lamb at twice the age of other sheep? My *Selima* yeaned a healthy lamb in her *sixteenth* year. All of the race may not do this—but all I have known retained fecundity much longer than any other race of sheep.—Their freedom from all diseases incident to other sheep, may have assisted this natural perfection. They yeaned with much more ease, and few if any casualties occurred in lambing.—I have, now, none of this breed I can recommend.

Your pair may not be prolific, yet may be of a good kind, except as to the wool. How many pair of comely and promising Bipeds do we see, without progeny? Were we to generalize such instances, we should tremble under the apprehension that the human race would cease to "*increase and multiply, and replenish the earth.*"—*Malthus*' alarms would then be nugatory indeed.

In my account of the Tunis sheep, vol. 2d. page 221, I relate the difficulty of a Tup of the common kind, coupling with a Tunis Ewe. But no such difficulty is experienced either with a common ewe, or with a female *Laticaudæ*. Nature is too wisely directed, to permit any impediments to their intercourse. I would not be understood to say, that the Tunis fleece is comparable to that of really fine wooled sheep. But its abundance, its not being deciduous, and its applicability to all common uses, for which fine wool is unfit, far overbalance its inferiority in this regard, and entitle this singular animal, emphatically; its superior carcass, too, considered; to the appellation of the *Farmers' Sheep.*

In some instances of apparent incapacity, I have succeeded by changing the male, or the female, as the case required. This I have practised with cattle, as well as sheep.

I have been, at several periods of my life, a breeder of sheep and cattle, and have had as fine animals as *most* I now see. The English breeds were *then* not so highly improved, as they are *now* esteemed to be. We procured our breeders chiefly from Holland, the low countries of Europe and Germany. Save that the *Alderney* race were always in high estimation. I had them, during twenty years, in great perfection I never found much certainty in breeding great *milkers*, even from the best parentage; though often I have had success. My farms have been chiefly devoted to large dairies, during more than forty years past.

My days of agricultural activity have passed away, and I can now only enjoy recollections; and also the gratification of seeing my early endeavours now far exceeded. I rejoice to perceive the spirit for improving our stock, so generally and meritoriously diffused; and am signally delighted by its prevailing where it was most required.

I, at one time, was seized with a zeal for breeding of *Horses*. In 1777, when the British took possession of our city and its environs, I had a number of high blooded young Colts, which I failed in having driven off from one of my farms. Ten or eleven of them were shot down by the Hessian or Yager Banditti, for their skins. This was a damper to my equestrian propensities.—When I returned to my domicil, I found my farm near the city, desolated and temporarily ruined—houses and farm buildings all burnt; and all enclosures and much forest timber taken away. Yet the wanton destruction of the young horses, and the barbarian and merely mischievous prostration of an extensive and well selected collection of fine, young and thriving fruit trees, mortified me more than the more important deprivations. Added to weightier excitements to avenge my *rebellious* exertions, an illiberal officer of a British picket, was stung by an imprudently smart girl, who remained with her widowed mother in the farm house. He sarcastically told her, that "*Washington* had been a low mechanic."—She replied that she had never heard that part of his history—but *their* General, *Howe*, was assuredly one—he was a *Whig*-maker. The house was burned in a night or two after.

But, as a mark of *good breeding*, I will close my prosing letter, which I began only to rescue my favourite Tunisians from unmerited imputations. My subject is, however, not a *barren* one. You will, therefore excuse my prolific prolixity, and permit me to offer you sincere assurances of my best regards.

Your's, very truly,
RICHARD PETERS.

J. S. Skinner, Esq.

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Cultivation of GRAPES, and Fabrication of WINE.

Georgetown, *D. C. Nov. 9th*, 1822.

J. S. Skinner, Esq.

Dear Sir—I have been examining my wine this morning, and find it fit to rack, which I shall do the first clear cold weather. Some of it is very rich; but a part of it has rather a hard taste; yet this I expect will go off after it is racked. I intend to rack it twice, between this and the close of January; and as soon as it is bright after the last racking, I expect it will have assumed its character, so that its quality may then be determined. I have most of it subscribed for, by officers of the United States government, and citizens of Washington or George-Town.

I observe that my letter, which you published in No. 32 of the American Farmer, is rather obscure, where it says, "so that the whole vintage was 65½ bushels." This was the produce of four tenths of an acre; I had in the whole, more than double that quantity of grapes, which grew on, "in all," about an acre of ground.

Your's respectfully,
JOHN ADLUM.

Upwards of one hundred and thirty bushels of grapes may have been gathered as above, off one acre of land. One bushel of grapes yielded Major Adlum, as is stated in No. 32, page 256, three gallons of juice. An acre of land would therefore yield agreeably to that rate, nearly 400 gallons of juice, or probably about 350 gallons of wine. The value of this produce, would chiefly depend, first upon the choice of a good grape, and secondly upon the skill of the fabricator. And independently of these, the profit might finally turn upon the economy of labour practised in the various operations. The arrangements will in the infancy of this business be unavoidably imperfect; but when prudence will permit the formation of large establishments, the cost of fabrication may be greatly reduced. Still, if at this day, good wine could be furnished worth only one dollar per gallon, and 350 gallons be obtainable from the produce of one acre of land, would this not be a great return, if the cost of production even amounted to five sevenths of its value?

And that good wine has been made by Major Adlum, we have the assurance of Mr. Jefferson, conveyed in the subjoined letters, which he wrote sometime since. In these, he compares part of Major Adlum's wine to good red Burgundy; and then advocates the culture of grapes, and fabrication of wine from their *pure* juice.

We have tasted wine, subsequently made by Major Adlum, in imitation of Madeira, that was strong and sound; it had been brandied however, and the flavour partook of "a hard" or mawkish character, very different from that of good Madeira. Whether this arose in the fabrication, or is attributable to the flavour of the grapes, we could not tell, but we hope the former, because it more easily admits of a remedy. Experience will soon teach our vignerons to make perfect wine; and scientific observers will hasten that result.

We have received from Major Adlum the small volume on the fabrication of wine, of which we formerly made mention, and as soon as we can find room for it, our readers shall be made acquainted with its contents. This will probably occur about the commencement of our next vol., and be then in time to permit its re-publication long before the recurrence of our wine and cider making months.

Ed. Am. Farmer.

The following are the letters from Mr. Jefferson on the subject of domestic wine.

Major Adlum, *Monticello*, *Nov.* 11, 1809.

Sir—While I lived in Washington, a member of congress from your state, (I do not recollect which) presented me with two bottles of wine made by you, one of which, of Madeira colour, he said was entirely factitious; the other, a dark red wine, was made from a wild or native grape, called in Maryland, the Fox Grape, but very different from what is called by that name in Virginia. This was a very fine wine, and so exactly resembling the red Burgundy of Chambertin (one of the best crops) that on fair comparison with it, of which I had very good on the same table, imported by myself from the place where made, the company could not distinguish the one from the other. I think it would be well to push the culture of this native grape, without losing our time and efforts in search of foreign vines, which it will take centuries to adapt to our soil and climate.

The object of the present letter is so far to tresspass on your kindness, and your disposition to promote a culture so useful, as to request you at the proper season, to send me some cuttings of that vine—They should be taken off in February, with 5 buds to each cutting—and if done up first in strong linen, and then covered with paper and addressed to me at Monticello near Milton, and committed to the post, they will come safely, and so speedily as to render their success probable. Praying your pardon to a brother-amateur in these things, I beg leave to tender you my salutation and assurances of respect.

TH. JEFFERSON.

Extract, *dated Monticello*, *April* 20, 1810.

"I noted Cooper's recipe for making wine, which you mentioned in your letter, and regretted it because it will have a tendency to continue the general error in this country, that brandy always, and sugar sometimes are necessary for wine. This idea will retard and discourage our progress in making good wine. Be assured that there is never one atom of any thing whatever put into any of the good wines made in France. I name that country, because I can vouch the fact from the assurance to myself of the vignerons of all the best wine cantons of that country, which I visited myself. It is never done, but by the exporting merchants, and then only for the English and American markets, where by a vitiated taste the intoxicating quality of wine, more than its flavor, is required by the palate.

I pray you to accept my thanks for your kind attention to my request. It was made with a view to encourage the example you have set, of trying our native grapes already acclimated, rather than those which will require an age to habituate them to our climate, and will disappoint and discourage those who try them; and with my thanks, I tender the assurance of my great esteem and respect.

TH. JEFFERSON

Major J. Aldum.

George Town, *D. C. July* 1*st*, 1822.

Dear Sir,

In one of Mr. Jefferson's letters to me, he mentions "*the wine made of the Fox grape of Maryland, which is very different from the grape so called in Virginia.*" It may be, therefore, well to add the following observations on this fox grape:—Mr. Bartram, who had the botanical garden at Kingsessing, on the Schuylkill river, not far from Philadelphia, gave me the following history of it—It was found growing near the Schuylkill, by a Mr. Alexander, who was gardener to Governor Penn, before the revolution, and he thought it so superior to any of the native grapes, he was acquainted with, that he introduced it into Mr. Penn's garden, from whence it has made its way by the name of the English fox grape, and sometimes by the name of the Alexander grape.

In a letter from Wm. Penn, dated August 18th, 1683, to the Free Society of Traders residing in London, (see Proud's History of Pennsylvania, vol. 1, page 249,) speaking of the natural produce of the country, he says:—

"The great red grape (now ripe) called by ignorance, the fox grape, because of the relish it hath with some unskilful palates, is in itself an extraordinary grape; and by art, doubtless may be cultivated to an excellent wine, if not so sweet, yet little inferior to the *Frontiniac*, as it is not much unlike it in taste, ruddiness set aside; which, in such things, as well as mankind, differs the case much." And on the same page he further observes—"It seems most reasonable to believe, that not only a thing groweth best, where it naturally grows, but will hardly be equalled by another species of the same kind, that doth not naturally grow there. But to solve the doubt, I intend, if God gives me life, to try both, and hope the consequence will be, as good wine as any of the *European* countries, of the same latitude do yield."

I have given the above extract to do away, if possible, some of the prejudice that exists against the fox grape, having paid more attention to it, than I suppose any other person has. I have found several varieties of it very palatable, and prejudice aside, many of them may be used by the most delicate palate, with a degree of satisfaction—though I, at the same time admit, that a great majority of them are far from being agreeable to the taste.

Respectfully your's,
JOHN ADLUM.

J. S. Skinner, Esq.

We had arranged the above for the press, before we read the following remarks in the National Intelligencer, upon the manufacture of wine, &c.; the writer of which, observes, that "in his method, a bushel of grapes did not yield one gallon of juice;" whereas, Major Adlum obtains nearly three gallons of juice from the bushel of bunches." Whether the difference in these results was owing to a difference in the power and continuance of the pressure, or in the nature of the grapes, or to inaccuracy in the estimates, we shall be better enabled to decide, after Major Adlum shall have answered the inquiries of J. C. B.; who appears to think "that his own process was very imperfect," as we should ourselves have inferred; because, after allowing one fourth for unoccupied space in the bushel, and half of the residue as the measure of skins, seeds and pulp, three gallons would still remain that might be juice, if the grapes were of a good kind.

Edit. Am. Far.

ON THE MANUFACTURE OF WINE, &c.

To the Editors of the National Intelligencer.

Gentlemen: In the Intelligencer of 9th Nov. last, is a letter from Mr. Adlum, to the Editor of the American Farmer, giving an account of his vineyard, and its product, &c. in which he says, "that a bushel of bunches yields about three gallons of juice." Mr. Adlum would confer an obligation, by communicating, through the medium of your paper, the process which he pursues in making wine: how he mashes the grapes—how long they remain in that state before pressed—how managed after being pressed—how fined, &c. In the years 1820 and 1821, I made a small quantity of wine from the native grape. My method I think a very imperfect one, not yielding a gallon of juice to the bushel of grapes. I have frequently been requested to give information how to make wine. My method was, to bruise the grapes, and let them remain in that state about 12 hours; then press them, putting the juice into vessels, letting it remain until the juice emitted a white froth, then tighten the bung gently until tranquil. I added one pint of brandy to each gallon of the juice, &c.

J. C. B.

December 5th, 1822.

GUINEA CORN AND GUINEA GRASS.

Pine Forest, Dec. 26th, 1822.

Dear Sir,

I enclose a small piece of what is called in our state, a kind of *Guinea Corn*—the head I cut it from, is about 2 feet long; and was presented to me by Capt. J. Wharley, of Colleton district, in this state, who informed me that it was very *productive*, to cut as the Guinea Grass, to feed horses, or cattle. He had this year, more than thirty stalks, from one seed.

Of the Guinea Grass seed, which I raised the last year, much did not vegetate; still I had some very fine, and, with many of my neighbours, have saved more seed this year, by shaking it off; and I hope it has arrived to a greater state of maturity. I must also observe, that the Jamaica seed failed, at least three parts out of four. The seed which I planted about the 10th of May, came up much better, than what I planted the first week in April. I will send you some by the next opportunity. The sample of Guinea Corn I send, appears to be similar to the fig. numbered 1, in the 36th No. 4th Vol. of the American Farmer. With my sincere wishes for an increased circulation to the Farmer,

I am your ob't serv't.

JOHN S. BELLINGER.

CLOVER—DOES IT NEED A SHELTERING CROP?

Bridgetown, Jan. 7th, 1823.

Dear Sir,

Have any of your readers sown clover seed by itself on ground well prepared? If they have, what was the result compared to that sown with winter or spring grain? Does the crop increase or diminish the grass crop? Will the clover take and stand the drought of the first summer better, when sown with grass, than when sown by itself? I am induced to make these enquiries in consequence of an accidental trial of the subject, made by an observing farmer of this county, which he relates to me as follows:—Having failed in his efforts to seed his ground with clover, for two or three successive years, with the wheat crop, he last spring sowed spring rye on ground well prepared, and afterwards sowed it down with clover seed; when the rye came up, he found that he had missed one land when seeding the rye, as none grew on it. The clover came up well on all the ground, but sooner on the ground where there was no rye, where it also grew ranker and faster. During the latter part of the season there was a drought which killed almost entirely all but this one land, which stood it well, and on which he is sanguine in his expectations of a good crop of grass next season. Since hearing of the case, I have found in the transactions of the Society for the promotion of Agriculture, Arts and Manufactures, in the state of New York, 2d part, published in 1794, a paper by Ezra L'Hommedieu, Esq. in which he relates an instance, in which the clover seed was sown alone on poor loomy land, and came up, and the next year produced a good crop, leaving the land much better afterwards. Now, I know it has been a very common complaint for some years, that it was very difficult to get clover to take and stand through the first summer. I ask then, would it not more certainly succeed if sown alone, and allowed the first and sole nourishment of the manure, for its support during its most helpless and tender state of existence?—And, if so, will not the greater certainty of a good clover crop compensate the farmer for the loss of the grain crop? I conceive that it is at least worthy of a fair and conclusive trial.

Very respectfully your's,

EPHRAIM BUCK.

John S. Skinner, Esq.

THE FARMER.

BALTIMORE, FRIDAY, JANUARY 17, 1823.

VARIETIES OF CORN, OATS, &c.

We are indebted to a Maryland Farmer for specimens of corn, produced from seed that we had sent to him; "among them, some gourd-seed "corn, having more than thirty rows[*] on the ear, "and some yellow flint corn that came to per"fection, quite hard in less than nine weeks."—This evidence of kind remembrance and willingness to experiment and report the results, encouraged us to ask our friend to place us under new and greater obligations to him, for the benefit of others. And that we may not "press unfairly upon the willing steed," nor draw important conclusions from the issue of a single experiment, we beg leave to submit our views, and present our wishes to every friend of agriculture, who can find time, opportunity and the means of making the designated, or similar experiments.

We wish them to cultivate approved varieties of corn, under equal circumstances, in experimental patches; and to compare the productions of each, in the following particulars:

The quantity in weight and measure of corn and cob, together and separately—the spirits obtainable from these collectively, and from the corn alone—the quantity of fodder—the practicability of making equally good *under* crops, such as peas, beans, cymblins, pumpkins, &c.—the time which each variety occupies the land, and may be taken off, out of the way of seeding wheat or rye.

Such comparative experiments on this and other crops, would be interesting and beneficial—and until we proceed with accuracy, through such details, we will continue as much afloat as ever, and our opinions of the comparative value of different crops, or varieties and parts of these, be merely conjectural.

We had sent to our friend some Black, Sweedish Oats, that Mr. Christopher Hughes, Jr. presented to us; and the receipt of them was accompanied by the expression of a wish that they might succeed on his farm, although he had not found any, of many tried varieties, to yield better than the common kind of our country.—We shall have it in our power, and we have promised to send him two varieties, that have been carefully and satisfactorily cultivated, in this county—the potato and the tartary oats—they are productive and heavy. The potato oats gives the best straw; its leaves are numerous, making an impenetrable shade—the tartary yields rather the most bushels of oats; the potato variety outweighs the other, it also meals the best, but it must be sown upon good ground. The first season that the potato oats were cultivated in this county, from imported seed, the produce was not satisfactory in quantity, and the quality was inferior to the original seed; but they improved the next year, and are now exclusively grown by some attentive farmers in this neighbourhood. Oats are now sold in Baltimore by the standard bushel of 30 lbs. weight. We are told that the Tartary and Potato Oats weigh about 36 to 38 lbs. per heaped bushel, as formerly sold. These we wish to have tried against our friend's common kind, under equal circumstances, and to obtain for publication from him, next fall, when we would be glad to receive from others also, demonstrative reports upon the relative value of these and other crops.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $7 25—Howard st. Superfine, $6 87½—Wharf, do. 6 12½—Wheat, white, $1 35 to 1 40—Red do., $1 27 to 1 30—Rye, 71 to 75 cents—Corn, 62 to 65 cts.—Oats, 35 to 37½ cents—Beef, live cattle, $5 to $5 50 per cwt.—Beef, 8 cents per lb.—Bacon, round, 10 to 11 cts.—Pork $4 50 to 5 50 per c lb.—6 to 8 cts. per lb.—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Clover seed, $9 to 10—Timothy seed, 4½ to $5—Flax seed, 75 to 80 cts.—Whiskey, from the wagons, 32 to 36 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, none in market—Herrings, No. 1, $3 62½ per bbl.—No. 2, $3 37½—Fine salt 80 to 90 cts. per bush.—Coarse, do. 75—Butter, 20 to 25 per lb.—Eggs, 25 cts. per doz.—Turkeys, 62½ to 75 cts.—Geese, 28 to 37½ cts.—Chickens, $1 50 per doz.—Straw, $10 per ton—Hay, $17.

Maryland Tobacco—Of the fine qualities, *none*—Good red, $8 to 10—Common do. $5 to 7—Dark brown, $3 to 4—Second do., $2 to 5—all in demand.

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[*] *One had 38 rows.*

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, at the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job printing is executed with neatness and despatch—Orders from a distance for Printing or Binding, with proper directions promptly attended to, addressed to J. Robinson, Baltimore

THE AMERICAN GARDENER.

CHAPTER IV.

Vegetables and Herbs.

191. The word, Vegetables, is not, as was observed in Paragraph 5, quite properly used here. This Chapter treats of the things cultivated in the garden to be eaten at our tables as food; and, they are *Vegetables;* but, a *tree* is also a vegetable; and such is a *herb* or a *flower*. Therefore, as a distinctive appellation, the word, *vegetubles*, is not strictly proper. But it is the word *we use* to distinguish this class of the products of the earth from others; and therefore, I use it upon this occasion. Herbs are usually placed as a class separate from *Vegetables;* but, while some of them are merely medicinal, like *Pennyroyal*, others are used, not only in medicine and in soups, but also eaten in salads. Therefore, it appeared to be best to bring into this one alphabetical list, all plants usually grown in a garden, except such as come under the heads of *Fruits* and *Flowers*.

192. ARTICHOKE.—A plant little cultivated in America, but very well worthy of cultivation. In its look it very much resembles a *thistle* of the big-blossomed kind. It sends up a seed stalk, and it blows, exactly like the thistle that we see in the *Arms of Scotland*. It is, indeed, a thistle upon a gigantic scale. The parts that are eaten are, the lower end of the thick leaves that envelope the seed, and the bottom out of which those leaves immediately grow. The whole of the head, before the bloom begins to appear, is boiled, the pod leaves are pulled off by the eater, one or two at a time, and dipped in butter, with a little pepper and salt, the mealy part is stripped off by the teeth, and the rest of the leaf put aside, as we do the stem of asparagus. The *bottom*, when all the leaves are thus disposed of, is eaten with knife and fork. The french, who make salads of almost every garden vegetable, and of not a few of the plants of the field, eat the artichoke in salad. They gather the heads, when not much bigger round than a dollar, and eat the lower ends of the leaves above mentioned raw, dipping them first in oil, vinegar, salt and pepper; and, in this way, they are very good. Artichokes are *propagated* from *seed*, or, from *offsets*. If by the former, sow the seed in rows a foot a part, as soon as the frost is out of the ground. Thin the plants to a foot apart in the row; and, in the fall of the year, put out the plants in clumps of four, in rows, three feet apart, and the rows six feet asunder. They will produce their fruit the next year. When winter approaches, earth the roots well up; and, before the frost *sets in*, cover all well over with litter from the yard or stable. Open at the breaking up of the frost; dig all the ground well between the rows; level the earth down from the plants. You will find many young ones, or offsets, growing out from the sides. Pull these off, and, if you want a new plantation, put them out, as you did the original plants. They will bear, though later than the old ones, that same year.—As to *sorts* of this plant, there are two, but they contain no difference of any consequence: one has its head, or fruit pod, *round*, and the other, rather *conical*. As to the *quantity* for a family, one row across one of the plats will be sufficient.—For *Jerusalem Artichoke*, see *Jerusalem*.

193. ASPARAGUS.—Were I writing to Nova Scotians, I ought not to omit to give instructions as to *which end* of the Asparagus the eater ought to use; for I knew a gentleman of that country, who, being at New York, on his first trip from home, began eating at the stem in place of the point. Writing, as I now do, to those, whose country produces, with the least degree of trouble, the finest asparagus that I ever saw, and probably the finest in the world, no description of the plant, or of its uses, is necessary. But, some remarks on its propagation and cultivation are not wholly unnecessary; for, though it demands less trouble in America than elsewhere, it demands some; and, in proportion as it is valuable and esteemed, it is desirable that the means of procuring it should be well and generally understood.—It is *propagated* from seed. Gather the seed, when it is *dead ripe*. Sow it thinly in drills a foot asunder, and two inches deep, three weeks, or about, before the frost sets in. Press the earth well down upon the seed; and as soon as the frost sets in, but not before, cover the ground with muck, or litter, a foot deep, and lay some boards, or poles, to prevent its blowing off. As soon as the frost breaks up in the spring, take off the litter; and you will have the plants quickly up. (See Paragraph 159.) When the plants are fairly up, thin them to four inches asunder; for, they will be four times as strong at this distance as if they stood close. Keep them clean and hoe deeply between them all the summer.—To have *beds* of Asparagus, there are two ways of going to work: first, sowing the seed in the beds at once; and, second, making the beds, and removing the plants into them. It is desirable to have the beds about four feet wide, that you may cut the asparagus by going in the paths between them, and not trample the beds. As to the *first method*, if the soil have a *dry bottom*, trench in the manner described in Paragraph 20; but, in this case, where there is a root always penetrating downward, do not content yourself with a clean trench two feet deep; but, *before you turn your top earth into this trench*, put some good manure into it, and *dig it into this bottom part;* and then you will have manure at *two feet and nine inches from the surface*. Your ground being ready, lay out your beds, four feet wide, with a path two feet wide between each two beds. In the *fall*, having made all the ground right strong with manure, draw the earth to six inches deep *from the top of the beds into the paths*, which will then form high ridges. Then draw your drills *a foot apart*, and sow your seed, as before directed. When they are up, in spring, thin them to *a foot apart*. Thus you will have them a foot apart all over the bed. Keep the plants clean all summer; and, when the haulm is *yellow* in the fall, cut them off near, or close, to the ground; but, let the haulm be *quite dead first;* yet, do it before the frost actually *sets in*. When you have cut off the haulm, lay some litter upon the bed till spring, to prevent the frost from being too long coming out of the ground in spring. When the frost breaks up, throw some wood ashes, or, some other manure about an inch deep over the bed, having first loosened the top of the bed, with a fork. Upon this manure, throw earth over the bed, out of the paths, three inches thick, and break it very fine at the time. In the fall, cut down the haulm again as before; repeat the winter operation of littering; and, in the spring again fork up, put on ashes or good mould, and the *other three inches deep of earth* out of the paths. Thus you bring the beds to be an inch or two higher than the paths; and *this year*, if your work have all been well done, you may have some asparagus to eat. The next fall, and every succeeding fall, cut down the haulm and cover with litter as before; and, in the spring, of this third year, put on ashes again, or other fine manure, and throw over the beds the earth that will come out of the paths dug six inches deep. This will make the paths six inches lower than the beds, and that is a great convenience for *weeding* and for *cutting* the Asparagus. After this, you are to cut down the haulm in the fall, cover with litter during winter, fork up and occasionally manure in the spring, to keep the ground constantly free from weeds, to dig the paths up every fall, and keep them clear from weeds in summer.—The *second method* of making the beds is to begin with *plants*, instead of seed. The plants (raised as above stated) may be planted in the beds at one year old, or older, if it so happen. Plant them at the same depth that is pointed out for depositing the seed. And, in all other respects, proceed as in the case of a bed begun with seed. As to the time of *beginning to cut*, some say the *third* year, some the *fourth*, and some even the *fifth*. There can be no *fixed time;* for, so much depends on the soil and treatment. Asparagus, like other things, ought to be used when it comes in perfection, and not before.—All that has here been said proceeds upon the supposition that the soil has a *dry bottom*: If a *wet bottom*, sow, or plant, at the *top of the ground*, and, in all other respects proceed as in the case of a dry bottom; except, that the earth to cover the bed with must, time after time, be dug out of the paths, which will, at last, make the paths into ditches, *three feet deep from the tops of the beds*. By these means the roots of the plants will be kept some years longer from reaching the cold, sour soil at the bottom; for, whenever they *reach that*, the plants, like all others, cease to flourish, and begin to decay.—As to the time that asparagus beds *will last*, that depends on the soil. Having a dry bottom and good management, they will probably last *three generations*, and if that be not enough to compensate the trouble of making them, it would be difficult to find a compensation. The general cause of the decay of Asparagus-beds is, *negligence;* and, particularly the want of attention to keep them clear of weeds, which, without doubt, are the greatest enemies of the plants. These send their roots down deep; but, they rely also on the ground at the surface. The lucerne, which will send its roots down *thirty feet* into a dry bottom, and will live in vigour for an age, if kept clean at top; will, though in the best and most suitable soil in the world, perish in a few years, if grass and weeds be suffered to grow amongst it on the surface. Sea-sand, where it can be had, is as good as ashes, *except* the beds are *very near the sea;* and there it is of little use.—With regard to *sorts*, I do not know that there is any difference, except such as *climate produces*. It is very certain, that, to whatever cause owing, the Asparagus here, though so little care is, in general, taken of it, is far superior to that in England. From our frequently meeting with it at a great distance from all houses, there is reason to suppose, that it is a natural weed of the country; and, therefore, it may differ from the English sort, as the *Charlock* and some other weeds do. In England the Charlock has a leaf like that of the *white turnip;* here it has a leaf the colour of that of an early York cabbage; that is to say, of a *blue-green* colour. There may be a difference between the Asparagus of America and that of Europe: at any rate, I will ascertain the fact; for, I will carry some seed to England.—As to the space which the beds ought to occupy, that must depend on the size of the family, who are to eat the Asparagus. *Plenty*, however, is always a blessing when the commodity is a good one. About six beds across one of the Plats will be sufficient for any family. They might be at the west end of Plat, No 6, that being the warmest.—Asparagus may be had in *winter* with the greatest facility. There are but few things that are worth the trouble of a hot bed for the purpose of having them to eat in their opposite season, but, Asparagus is worth it. And this is the way to have it for the table, even in February, that month of snow and of north-westers. Sow some seed in the garden, in the manner before des-

cribed, the rows a foot asunder, and the plants four inches apart in the row. Keep them clean, and manure them the first year. Cut the haulm off in the fall. Do not cover them during winter. In the spring fork up the ground, manure it again; and, in the fall cut off the haulm again. Just before the frost sets in, take up as many plants as you will want for your hot-bed. Dig each plant up without tearing it about; and put them all carefully on a cellar floor, cover them over about half a foot thick with fresh ground, and lay some straw upon that to prevent the earth from drying too much. In January prepare dung for a hot-bed; and make the bed in the manner as directed in Paragraphs 69 to 74. When the heat has sufficiently risen, put on earth as in Paragraphs 75 and 76. Upon this earth put your plants, straightening out their roots in every direction, Let the crowns of the roots be about 7 inches apart all over the bed, which, being a bed four feet wide and nine feet long, will contain 180 plants. Cover the plants over with fine earth, so that the surface of this earth be six inches above the crowns of the plants. Proceed as to air, shelter, and convering in the same way as directed for the cabbage-plants. In about twelve, or fourteen days, you may begin to cut asparagus for the table; and, if you take proper care, and keep your heat up by *a lining* (see Paragaph 93,) you may have a regular supply for a month. When the plants have done bearing here, they are of no use, and may be thrown away. Of all the things that are *forced* in hot-beds, none give so little trouble as Asparagus, and none is so well worth a great deal of trouble.

194. BALM is a herb purely medicinal. A very little of it is sufficient in a garden. it is propagated from seed, or from offsets. When once planted, the only care required is to see that it does not extend itself too far.

195. BASIL is a very sweet annual pot-herb. There are two sorts, the dwarf and the tall. It should be sown in very fine earth, and, if convenient, under a hand-glass. The bunches may be *dried* for winter use.

196. BEAN.—The only species of bean much used in this country, is, that, which, in England, is called *Kidney-Bean*, and in France, *Haricot*. Of these I shall speak in the next article. The Bean I here mean is, what is called by most persons in America the *horse-bean*. In England there are some sorts of this bean used for horses and hogs; but there are several sorts used as human food. It is, at best, a coarse and not very wholesome vegetable; yet some people like it. It is very much eaten by the country people of England, with their bacon, along with which it is boiled. There are several sorts of these garden-beans, the best of which is the large flat seeded bean, called the *Windsor-Bean*. The *Long Pod* is the next best; and though there are several others, these are enough to mention here.—The bean is difficult to raise here. It does not like *dry and hot weather*; and it likes *moist and stiff land*. If attempted to be raised in America, it should be sown *in the fall* by all means (see Paragraph 159;) but, still it is useless to sow, unless, you guard against *mice*. If sown in the South Border, where it would be shaded and protected from the hot sun, it might do pretty well; and the vegetable is convenient, as it follows immediately after the early peas are gone.—Ten rows of these beans across the South Border, four feet apart, and the beans four inches apart, will be enough for a family.

197. BEAN (KIDNEY.)—Endless is the variety of sorts. Some are *dwarfs*, some *climbers*; but, the mode of propagating and cultivating is nearly the same in all, except that the dwarfs require smaller distances than the climbers, and that the latter are grown with poles, which the former are not. In this fine country the seed is so good, the soil and climate so favourable to the plant, the use of the vegetable so general, the propagation and cultivation so easy, and so well understood, that little in detail need be said about them. I prefer sowing the dwarfs in *rows* to sowing them in *bunches* or clumps. It is a great object to have them *early*, and, they may be had much earlier than they usually are with a little pains. It is useless to sow them while the ground is *cold;* for they will not grow till it be warm; but, there are means to be used to get them forwarder than the natural ground will produce them. If you have a *glazed frame*, or a *hand-glass* or two (see Paragraph 94,) use one or the other in this case; but, if not, dig a hole and put in it, well-shaken together, a couple of wheel-barrows full of good hot dung; and lay some good rich mould upon it six inches thick. Then lay on this some of the earliest sort of dwarf-beans. Put them not more than an inch apart, and cover them with two inches of fine rich mould. Bend some rods over the whole, and put the ends of the rods in the ground; and every evening, cover this sort of roof over with a bit of old carpet or sail-cloth. In default of these, corn-stalks may do. Do this when the winter frost is just got out of the ground, or soon after. The beans will be up in a week's time; and, in about a fortnight afterwards, they will be fit to remove. The place for them is under a wall, a pailing, or a hedge, facing the South. Prepare the ground well and make it rich. Take a spade and carry away a part of the beans at a time, and plant them at six inches asunder with as much earth about the roots as you can. Plant them a little deeper than they stood in the bed. They are very *juicy*, and may have a *little* water given them as soon as planted. Shade them the first day, if the weather be warm and the sun out; and *cover them every night till all frosts be over*. This is easily done, if against any sort of fence, by putting boards, one edge upon the ground and the other leaning against the fence; but, if you have no fence, and have to plant in the open ground, it will be best to plant in clumps, and flower-pots put over the clumps will do for a covering. In Long Island a clod or two, or a brick or two, laid by the side of the clumps, will hold up a large *horse-foot fish shell*, which is an excellent covering. On the *first of June*, 1817, I saw a farmer at South Hampstead, covering his beans with *burr-dock* leaves, while there were hundreds of horse-foot shells in his yard. The dock-leaf would wither in the day. A fresh supply must be had for the next night. This circumstance shows, however, how desirous people are to get this vegetable *early;* and, by the method that I have pointed out, it may be had fifteen days, at least, earlier than it generally is.—As to the *main crop*, it is by no means advisable to sow very early. If you do, the seed *lies long in the ground*, which is always injurious to this plant. The plants come up feebly. The cold weather, that occasionally comes, makes them look *yellow;* and they, then, never produce a fine crop.—Of the various sorts of pole-beans one sowing is enough; for, if you gather as the beans become fit for use, they continue bearing all through the summer, especially the *Lima*-bean, which delights in heat, and for which no weather can be *too dry;* and which should never be sown till the ground be *right warm*. The *Dwarf* sorts may be sown all summer, from the time that the ground becomes warm to within *seven weeks* of the time that the little frosts *begin* in the fall; for, they will, at this season, produce, for eating green, in six weeks from the day of sowing. I sowed them on the 15th of August, and had several gatherings to eat green before the 2d of October when the *first frost* came. They were not *cut up* by the frost till the 17th of October; and they kept bearing till they were.—A row or two sown every fortnight, across one of the *Plats* (see Paragraph 60) will keep any family, however large, well supplied. And, perhaps twenty rows, across one of the Plats, for pole-beans of all the sorts that are desired, will be more than sufficient. It is best to sow several sorts of these; for some bear early and some later than others.—As to the *sorts* of Kidney-beans, they are, as I observed before, almost endless in number. I will, however, name a few: the *Dun*, or *Drab* coloured dwarf bean is the earliest. The same ground will bear and *ripen two crops in one year*, the last from the seed of the first. The *Yellow;* the *Black;* the *Speckled;* the *Painted;* white and red: these are all dwarfs; but there are a great many others. Amongst runners, or pole-beans, there are the *Scarlet-blossom*, the seed of which is red and black and the seed-pod rough. There is a *White* bean precisely like the former, except that the bean and blossom are white. The *Case-knife* bean, which, in England, is called the Dutch-runner; this is the best bean of all to eat green. Then there is the *Cranberry*-bean of various colours as to seed. The *Lima*-bean, which is never eaten green (that is, the *pod* is never eaten,) and which is sometimes called the *butter*-bean, has a broad, flat and thin seed of a yellowish-white colour. This bean must never be sown till the ground is right warm. The other sorts will grow and bear well in England; but this sort will not. I raised good and ripe Indian Corn at Botley; but, I never could bring a Lima-bean, to perfection, though I put it in the hottest spot I could find, and though cucumbers produced very well in the natural ground at a yard or two from it.—For the raising of dwarf beans on a large scale, see paragraphs 163 and 164. The pole-beans *may* be raised in the same way, only with larger spaces (six feet perhaps) between the rows, and *without any poles at all*. The seed *for sale* is raised in this way even in England, where the climate is so cold and wet compared to this. The poling is a great plague and expense; and if large quantities be raised, it may be dispensed with: nay it may be dispensed with in a garden; for poles look ugly there; they intercept the view; and the addition they make to the crop is not a compensation even for ill look, especially under this bright sun, where the ground is almost constantly dry.—Let it be observed, that every sort of Kidney-bean must have rich ground to produce a large crop.

198. BEET.—This vegetable, which is little used in England, is here in as common use as carrots are there. It should be sown in the fall (see Paragraph 159;) but, if not, as soon as the ground is free from frost, and is dry, in the spring. The rows a foot apart and the plants eight inches apart in the rows. In order to hasten the seed up in the spring (if sown then) soak it four days and nights in rain water before you sow it. Put it two inches deep, cover it well, and press the earth hard down upon it. Sow the seed pretty thick all along the drill; and, when the plants come up, thin them to eight inches apart. Hoe between the plants frequently; but *not very deep;* because these *tap rooted* things are apt to *fork* if the ground be made loose very low down while they are growing.—There are yellow and white Beets, as well as *red;* but the red is the *true* kind: the others are degenerate. There is, however, *round*, or *turnip-rooted*, red beet, which is equally good with the tap-rooted-beet.—The ground should be rich, but not fresh dunged. Ashes of wood, or compost mould, is best; and the digging ought to be very deep and all the

clods ought to be broken into fine earth; because the clods turn the point of the root aside, and make the tap short, or forked. *Fresh Dung*, which, of course, lies in unequal qualities in the ground, invites the tap root, or some of the side roots to it, and thus causes a short or forked beet, which, for several reasons, is not so good as a long and smooth one.—As to the preserving of beets during the winter, it is well known, that the way is to put them in a dry cellar, with dry sand between them, or indeed, without sand or any thing at all between them. They may, if in large quantities, and not wanted till spring, be preserved out of doors, thus: Take them up three weeks before the hard frost is to come. Cut off their leaves; let them lay two or three days upon straw, or boards, to dry in the sun; then lay a little straw upon the ground, and, in a fine dry day, place *ten bushels* of beets (picking out all the *cut* or *bruised* ones) upon it in a conical form. Put a little straw smoothly over the heap; then cover the whole with six or eight inches of earth; and place a green turf at the top to prevent the earth from being washed, by rain, from the point, before the frost set in. All the whole heap will *freeze* during the winter; but, the frost will not injure the beets, nor will it injure *Carrots*, preserved in the same way.—If you have more than ten bushels, make another heap, or other heaps; for fear of *heating* before the frost comes. When that comes, all is safe till spring; and, it is in *the spring*, that season of *scarcity*, for which we ought to provide. How many bushels of beets are flung about and wasted in the fall, the smallest of which would be a treat in the month of May!—As to the *quantity* to be raised for a family, eighteen rows, planted as above, across one of the Plats (little more than two perches of ground) will produce 812 beets, or nearly *four for each day*, from the first of November to the last of May; and, if they are of the size that they ought to be, here are much more than enough. Beets may be *transplanted*, and will, in that way, get to a good size. See Transplanting, Paragraph 169.

(To be Continued.)

REPORT ON THE STATE OF AGRICULTURE IN PRINCE GEORGE, VIRG.

No. 5.

At a meeting of the Agricultural Society of Prince George, held on the 9th March 1821, the following Report of the Committee, appointed at the request of the Delegation for that purpose, was read, unanimously adopted, and ordered to be laid before the next meeting of Delegates.

P. H. THWEATT, Sec'ry.

The committee appointed by the Society, to enquire into the state of agriculture in the county of Prince George, and to suggest the remedies which they may think calculated to correct the existing defects, regret to state, that the want of means for obtaining correct information will, of necessity, prevent as ample an investigation of the subject referred to them, as its importance merits.—They believe, however, that the report now submitted, though perhaps not altogether accurate, is at least free from those prejudices which would prompt either a flattering picture or hideous caricature.

The soil of this county is generally level, light and poor, though a considerable proportion differs in one or all of these characters. Rich land, or such as once was rich, is only to be found along the rivers and swamps which intersect the county. All the good soils have been long under cultivation, and are much exhausted, but still exhibit a marked superiority over the great body which was originally sterile. From one third to one half the county is arable, or cleared land, and the remainder woodland, tide marsh, swamp &c. very little of which is worth bringing under cultivation.*

The three-shift system (that is, corn followed by wheat, when the land is equal to the production of 4 or 5 bushels per acre, and the field then grazed until the fourth year, when its turn comes again for cultivation,) is now, and long has been the usual course. Those who pursue it, seek to prevent a diminution of their crops, by clearing the adjoining forest, and thus increase the size of their fields, or supply the place of what is utterly ruined and thrown out of cultivation. Their great object is to cultivate as much land as possible, and this so completely employs their labour as to leave very little for improvement. Under such management, it is scarcely necessary to add that our land becomes poorer every year. Though many have, to a greater or less extent, abandoned the three shift system, for a better; yet we fear there are still more, who practice even a worse mode, by denying to their fields that small share of rest which three shifts afford.

The quantity of Tobacco made for the last ten or fifteen years, has been very inconsiderable; and though the effort is now general to increase its production, (on account of the low price of grain;) that crop must still be very limited We have but little woodland to clear, rich enough to produce Tobacco, and therefore nearly all must be made on our small quantity of highly manured land.—If the first effect of this change, is increased attention to making manure, it also directs its whole application to a crop, which gives nothing to the soil in return, and must ultimately make the progress of exhaustion still more rapid than before.

Gloomy, however, as is this view of the tillage of our county, we hail with pleasure the dawn of light arising from the spirit of enquiry now generally excited, and the increasing interest which is felt on the subject of agriculture. We already perceive, within a few years, manifest evidences of improvement; and we therefore, in pursuance of our instructions, proceed with greater confidence to point out those obstacles which have in an essential degree tended to obstruct its advance. If in the course of this enquiry, propositions are advanced which appear either trite or paradoxical, we hope at least, that they will not be denounced, until investigation decides them to be useless or false.

In every age, country and situation, the best system of husbandry is *that which yields most clear profit to the cultivator, for the capital and labour employed*. The correctness of this definition will be admitted to be so palpable, as to need no elucidation. But obvious as it is, experience proves that it has been either totally disregarded, or is at best, but slightly operative. Nor do we conceive that we shall materially err, when we attribute the low state of husbandry principally to the inconceivable misapprehension of this subject, on the part of agriculturists of every description—whether practical or theoretical—improvers or exhausters of the soil.

Various and discordant as are the opinions of agriculturists, they may properly be classed under the two heads of *practical and theoretical*, which names, though not exactly appropriate, will serve for the purpose of distinction. With our practical men, he is the best farmer who cultivates the greatest number of acres, and who derives the heaviest *gross product* from the amount of labour employed. The first and generally the only questions asked to decide on the good or bad management of any individual, are, "How many labourers does he employ?"—"How many acres does he cultivate?"—"What amount of crop does he make?"—By such estimates, is the practice of most of us entirely regulated.

Yet the *gross product* is very different from the *nett product*, (in which the whole profit consists,) and the former may be, and frequently is, increasing, at the same time that the latter is diminishing. If farmers were in the habit of calculating the probable cost and profit of every process of cultivation and improvement, and in consequence, would reject whatever was not more profitable than costly, a most extensive and beneficial change would be immediately produced. It may perhaps be useful to state a few examples of its effects, and practices which are found on every farm in the county.

The cost of the cultivation of corn on average land, including every attendant operation, expense and injury, cannot be rated lower than \$5 per acre. The highest price of corn at this time, is \$2 per barrel,* and of course 2½ barrels per acre are necessary to replace the actual cost of cultivation, and from every acre cultivated producing less than that quantity, an actual loss accrues. Let us suppose a field of 60 acres to produce 180 barrels, of which 20 acres produce 5

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* *When the swamps of this county are said to be scarcely worth bringing into cultivation, the assertion is intended to apply to the only course which now can be adopted for draining them, that is, by the unconnected efforts of different individuals, who are compelled always to begin the work at the wrong end—on the outskirts and head branches, instead of at the outlet and through the middle of the swamp. Therefore all attempts have been attended with great labour and expense, and have never had more than partial success.—But if our Legislature would PERMIT extensive swamps to be drained on a rational plan, the improvement would be one of the most valuable and decidedly the cheapest which could be effected in lower Virginia. Blackwater Swamp and its numerous branches contain thousands of acres of the richest land, which is likely to continue useless and a nuisance. A considerable portion belongs to this county. A central drain ten feet wide would effectually reclaim all this land, and perhaps at the same time afford good sluice navigation during part of the winter. But however well assured its owners may be of the value, and cheapness of this operation, it never can be effected by private agreement among so many persons. If only one of their number refuses to unite in the plan, or is a minor and of course unable to consent, all the rest can do nothing—A law ought to be passed to grant to those owners disposed to attempt this work, power to proceed at their own risk, and only in case of their succeeding, compel all others benefited to pay their full proportion of the expense, out of the new value given to their land. In this way no person could possibly incur loss against his will, or have any reason to complain. If such a law should be considered an invasion of the rights of property, then still more so must be all laws for cutting public roads, digging canals, and indeed every other which combines the means, of all for the benefit of all.*

* *The price of corn has greatly increased since this report was made. The low price above stated caused a diminution of grain culture, and an increase of that of Tobacco and Cotton in this county, and as far as the same reasons operated, wherever climate and situation did not forbid the change. This, together with two successive bad seasons for corn, has nearly doubled its price. This temporary advance is however balanced by the depression of the price of Tobacco and Cotton, so as to leave our average profit for all our crops not very different from that of* 1820. *But whatever change may occur in price, it will not at all affect the "principle" on which these calculations are founded. All that is contended for is, that the amount of "nett product" is the measure and the proof of good husbandry; and from this propo-*

barrels per acre, 103 barrels at $2	$200 gross
Deduct for cultivation 20 acres at $5	100
Remainder, clear profit	$100
20 acres at three bbls. per acre, 60 bbls. at 2$ per barrel	$120
Deduct for the cultivation of 20 acres at $5 per acre	100
Profit	20
20 acres at 1 bbl.—20 bbls. at $2	$40
Cultivation of 20 acres	100
Absolute loss	60

This shews that two thirds of the field would have yielded $120 profit, and yet from the whole it amounted to $60 only. Considerable as is the loss stated, but few farmers in the county have a greater proportion of good, or a less proportion of poor land, than in the above example.—Such is the profit and loss arising from our best land. We feel no disposition to exhibit a similar statement of the worst.

Suppose the clearing an acre of wood land, and putting it in order for cultivation to cost $12, and its average product to be only 2 barrels: the regular loss attending its cultivation will be $1, besides $12 for the first improvement. Not one tract of the land regularly cleared yields sufficient nett product to repay the enormous expense of the operation.

Our theoretical, or improving farmers, by a different road frequently arrive at the same end, viz: diminishing the nett product, to augment the gross. They define good husbandry to consist in adopting every mode of enriching the soil, and of making the different processes of cultivation as perfect as possible, so as to make each acre produce to the utmost. This rule is derived from the publications and practice of Europe, and applied to American agriculture, without considering the great difference of circumstances. In England, land and produce are high, and labour cheap: it is therefore profitable to raise as much as possible from each acre, without much regarding the additional labour. In this country, land and produce are cheap, and labour dear; and it is therefore generally to our interest to make the most of our labour, and to estimate the quantity of land as of secondary importance: Even if the climate and products of the two countries were the same, the best Virginia management if practised in Britain, would quickly lead to ruin; and if the Lothian fallow, (the perfection of Scottish husbandry,) was adopted here, the whole crop of wheat added to the fee simple of the land on which it grew, would not pay the cost of preparation. This neglect of drawing a line of distinction between improvements suitable to our situation, and such as are not, is a fruitful source of error, to young and enterprising farmers. They are certain to bring upon themselves, serious losses, and by giving practical men an opportunity to triumph over *book-farmers*, their own bad habits are confirmed, and new obstacles opposed to the progress of improvement. Those who in the end become the best farmers, have almost invariably passed through a long apprenticeship of loss and disappointment.

To derive as much nett profit as possible from our capitals, it is necessary to discontinue much of the labour now devoted to both cultivation and improvement; but the application of the same rule will shew, that many improvements which are generally thought too dear, would be highly profitable. The least expense should be rejected, which did not promise profit adequate to its reimbursement; but permanent improvement cannot be purchased too dearly, provided the increased profit would more than pay the interest of the expenditure. A farm which would yield a regular annual profit of 600 dollars, after paying all the expense of cultivation, would be thought cheap at 10,000 dollars. But certainly it would be equally profitable, to lay out 10,000 dollars on the improvement of land, already in possession, if from that improvement, an additional clear profit of 600 dollars, could be derived; nor would the propriety of the measure be affected, whether the quantity of land thus improved, was 1000 acres, or only ten. This however, applies only to permanent improvement as clearing, draining, and the application of earthy manures which change the constitution of soils.—Improvements which are temporary in their effects, such as more perfect tillage, or animal and vegetable manures, to be profitable, must return the principal, as well as the interest of the expenditure.

The want of capital is considered an almost insuperable obstacle to the improvement of agriculture. None are now so listless, or so biggotted as to consider it unnecessary, but their wishes avail nothing, because, "they have no surplus capital, and their labour is already fully employed." It is true indeed, that the capital of agriculture is small, and its profits almost nothing; but we shall, notwithstanding, endeavour to shew, that we have the means for improvement fully within our reach, and without the slightest diminution of our clear annual profits. Capital cannot be increased at will, although it is not long since the belief prevailed that banking could effect that impossibility.—That opinion however, is no longer supported, and even our legislatures have become almost convinced of their mistake. If our capital cannot be made equal to our cultivation, at least our cultivation may be reduced, till the proper proportion is restored. This reduction is required even by views of annual profit, and in the portion now unprofitably directed, abundant means for improvement will be found. The full amount of labour, time and fertility thus thrown away, every one must estimate for himself; but many processes are so general, that we cannot err greatly in stating them. It would be both unnecessary and presuming in us to prescribe the precise means of improvement which shall be adopted; these must vary in different situations, and our remarks are grounded on the supposition, that every farmer knows *some* means by which he might improve with profit, could he spare time and labour for the purpose.

The labour of a plantation is devoted about twenty days in the year to repairing fences.—As those on the dividing lines of adjoining proprietors, are made at their joint expense, the fences between the several shifts, require at least one half of this time. By the discontinuance of division fences we should save ten days' labour of every year, and by so doing, protect all our fields from grazing, and thus allow the land to improve itself during the whole time of its rest. We expect no wonderful effects from merely inclosing, and none perhaps would be perceived for several years. But its benefits cannot on that account be questioned. Inclosing furnishes more vegetable matter to the earth, than could possibly be done in any other way, (on our poor soils,) without any expense being incurred, and with the actual saving of ten days labor. It is true, that we lose the means of keeping large stocks of poor cattle and sheep; but before we can admit this to be a loss of *profit*, it must be proved that some profit is derived from keeping stock in the usual mode. We are attempting to shew in what manner our business may be rendered the most profitable, and not by what means we may command most luxuries and conveniences; but even on this ground, a reduction of our stock to one third their present number, would enable us to derive from them as much gross product of wool, meat and butter, and far more clear profit than now.

About 45 days of the year, the whole of our labour is employed in clearing land, of which a very small proportion is rich enough to yield any clear profit. Allowing 15 days for clearing enough for firewood and other uses, there remains 30 which may be saved without diminishing the nett product of the farm.

Much land is planted in corn, which does not produce more than one barrel per acre, and about one half the arable land of the county, falls short of 2½ bbls. which has been stated as the least product that will defray the expense of cultivation. One half of our land is cultivated, not only without profit, but with certain and increasing loss; and to this purpose, our labour is devoted ninety days, the whole crop being supposed to require six months. Every consideration of profit demands that this portion of our soil should not be cultivated while in its present condition. This will save of our whole labour now unprofitably employed 10 + 30 + 90 = 130 days in every year, without diminishing, in the smallest degree, the farmer's nett profits. Every operation discontinued was a certain source of loss, nor is there any new employment for the labor on our farms, excepting their improvement. If then the smallest clear profit can be derived from the improvement of our soil, the change of more than four months of loss, to more than four months of gain, cannot fail to be greatly and immediately beneficial.

Your committee are aware that many trivial and some real objections, (in certain situations,) may be raised against the reduction of our cultivation to the extent recommended. We have already trespassed too much on your time, to shew in detail, in how few cases such objections are solid. Whatever may be the case under particular circumstances, the general question of expediency must turn on such statements as the preceding. If we have made an incorrect report of our situation, or if our estimates are false, let their fallacy be exposed—but if they are correct, or even approach correctness, it is scarcely possible for us to know our situation, and yet not receive benefit from such examinations of our own affairs. A complete change of system on a farm cannot be effected at once; but no man can be fully sensible that he is regularly throwing away one third, or even one sixth of his labour and income, without quickly attempting to remove the defect.

The obstacles to improvement, which have been mentioned, serious as they are, may be removed by our own exertions. There are others, of no less magnitude, which are beyond our control—evils which have been imposed on the agricultural interest by government, which can only be remedied by the same power. Required as we are to point out the causes of the depressed state of agriculture, it would be improper to

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sition it follows, that a course of cultivation or improvement may be at one time good, and at another bad, according to the variation in the price of the product.

pass unnoticed the violations of its rights and interests; but our limits compel us to touch but slightly on subjects, the fatal consequences of which it would require volumes fully to expose. The most injurious, of such violations of our rights, are the immense indirect taxes levied on agriculture, for the exclusive benefit of the paper, stock, commercial and manufacturing interests. Against the existing privileges and monstrous pretensions of the last, our societies have already made a determined, and we hope not an ineffectual opposition. May such exertions continue, until the great agricultural interest is fully awakened to a sense of its wrongs, which alone is necessary for their removal. The destruction of every fragment of exclusive privilege is demanded, not more by the interest of agriculture and the principles of sound political economy, than by the sacred rights of property which alone can offer security for freedom.

The commercial interest, (even on the grounds assumed by the advocates of monopoly,) needs no legal privileges, to be prosperous, rich and great. Its natural advantages have made their privileges conferred by government, rather nominal than real, and the few cases in which they have effect, serve to oppress agriculture and outrage justice, without converting even a tythe of the injury to the benefit of commerce.

All these oppressions, however, are trivial when compared to the legal privileges conferred on banking. Their defenders are now silent—nothing is now heard of the once boasted blessings which our country was to receive from banks.—But though convinced of their evil effects and worse tendencies, we refrain from their destruction, spell-bound, by the stale doctrine that charters are inviolable—that the people once despoiled of a right, are not justified in resuming it. We console ourselves too, under this submission, with the belief that with the profits of banking, the whole system must sink, and that its present state shews its end to be not far distant. This expectation is vain; when robbers are numerous, their dividend of booty must necessarily be small. The present temporary depression of the paper interest offers the strongest proof of its alarming strength; in this season of its greatest weakness—notwithstanding a loss of both property and character without parallel—although universally execrated—yet it is enabled to retain unimpaired its exclusive privileges, and to pay as little regard to the opinion of the people as it has ever done to patriotism, probity or honour.

It is possible for us to convert our wilderness into a garden, to increase tenfold the products of our field—but if the system be not overthrown, the increase of toil alone would be our share, while the profits would go to augment the wealth and power of chartered corporations and privileged orders.

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INSPECTION OF TOBACCO.

A further supplement to the act entitled, An act to regulate the inspection of Tobacco, chap. 194.

Sec. 1. *Be it enacted by the General Assembly of Maryland,* That from and after the first day of November next, except as to Charles and Saint Mary's counties, it shall be the duty of the several inspectors of tobacco, before they proceed to discharge the duties of their respective appointments, to take, in addition to the oath (or affirmation) already prescribed by the original act to which this is a further supplement, the following oath (or affirmation) as the case may be: "I, A. B., do solemnly swear (or affirm,) that I will faithfully and honestly discharge the duties of inspector of tobacco for the ——— ware-house; that I will, whenever I shall draw samples thereof in the manner prescribed by the provisions of this act, select without favour, affection, prejudice or partiality, such samples as in my conscience and judgment I shall deem a fair sample of the average quality of tobacco in the hogshead from which such sample shall be drawn, as far as can be ascertained by the breaks directed hereafter to be made; and further, that I will use every diligence to ascertain the true quality of tobacco inspected by me, whenever I shall suspect that any fraud has been used or practised in the packing thereof."

2. *And be it enacted,* That it shall be the duty of said inspector as aforesaid to break each and every hogshead by him inspected in not less than five different places.

3. *And be it enacted,* That it shall be the duty of the said inspectors as aforesaid, when required by the owner or agent to draw samples of the Tobacco which he or they shall inspect, to draw the same; and such samples so to be drawn, shall consist of not less than three bundles to be of the average quality of the tobacco in the hogshead from which the sample shall be drawn, as far as can be ascertained by the breaks hereafter directed to be made.

4. *And be it enacted,* That it shall be the duty of each and every inspector, when required so to do by the owner of any tobacco by him inspected, to confine the said samples by him drawn, in one bundle, by tying them together with a strong tape run through the head of said sample in such manner as may appear to him most likely to prevent the said bundle from separating: and it shall be the duty of the said inspector to confine on the said sample so united together, a slip of paste-board, and to seal the said tape and paste-board with sealing-wax, and to impress the said wax, with the stamp hereinafter directed to be provided, so that the name of the inspection where the said tobacco shall be inspected, may be legible on the said wax; and it shall be the duty of the said inspector to write on the said paste-board, the number of the hogshead from which the sample shall have been drawn, the name of the owner thereof and the name of the said inspector.

5. *And be it enacted,* That it shall be the duty of the governor and council for the time being, to cause to be prepared, a stamp for each and every inspection of tobacco as aforesaid, for which an inspector is or shall be appointed, and on which stamp, the name of the inspection for which it shall or may be prepared shall be engraven, and to cause the same to be forwarded to the inspector or inspectors thereof, to be by him or them used in stamping the wax by which the tape through the said samples as aforesaid, shall be secured as aforesaid.

6. *And be enacted,* That it shall be the duty of the clerk of the council to transmit to the clerks of the several counties to which such stamps shall be sent, the amount of the expense incurred by the state in procuring the same; and it shall be the duty of the said clerk to lay the same before the levy court of the said county, who are hereby instructed and required to cause the said sums so as aforesaid expended by the state for the use of such county, to be assessed on the assessable property of the said county to and for the use of the state, if the ware-house for which they are furnished be public property; and if they be private property, then the levy court are instructed to cause the inspector to retain a sum equal to the expense so incurred.

7. *And be it enacted,* That the inspectors aforesaid, for the performance of the duties imposed by this act, are hereby permitted to demand and retain for themselves, five cents for each sample by them stamped according to the provisions of this act, to be received by them on the delivery of the tobacco from which the same shall have been drawn.

8. *And be it enacted,* That it shall be the duty of the inspectors aforesaid, when required by the owner or his agent to draw duplicate samples, so to do, and to stamp the samples so drawn, according to the provisions of this act, the owner or his agent first agreeing to pay him aforesaid, for every duplicate sample thus furnished.

9. *And be it enacted,* That it shall be the duty of the levy court of the county where an inspection ware-house shall be located, to cause a part of the ware-house to be provided for the safe keeping of samples; and it shall be the duty of the said inspector or inspectors, to take care that the boxes (to be provided by the owners) in which the samples shall be deposited, shall not be injured nor the same opened, unless by the permission of the owners thereof, or their agents. And it shall be the duty of said inspectors to attend once in each of the months of April, May, June, July, August, September, October and November in every year, for showing the said samples to dealers; which days shall be appointed by the said levy court, and notice thereof shall be published in as many news-papers in the District of Columbia and Baltimore, as they shall deem necessary to give information of the days so appointed; and the provisions of this section are hereby declared not to extend to the city and county of Baltimore.

10. *And be it enacted,* That it shall be the duty of each and every inspector of this state to make an entry of the tobacco by them inspected, which may have been inspected at some other ware-house, and to incorporate a statement of the quality thereof so re-inspected in the quarterly reports to be by them made as hereinafter directed.

11. *And be it enacted,* That it shall be the duty of the several inspectors, on the first Monday of April, July, October and January in each and every year, to report to the treasurer of the state for the western shore, the quantity of tobacco inspected, re-inspected and delivered from his inspection house. And the form of such report, to be signed by the inspector, shall be as follows:

A report of the Tobacco inspected at and delivered from —— inspection ware-house during the quarter commencing on the —— day of —— in the year eighteen hundred and ——; ending on the —— day of ——, in the year of eighteen hundred and ——.

	Domestic growth.	Growth not of this state.	Reinspected.	Total.
Number inspected.				
Number delivered.				

And it shall be the duty of the treasurer of the western shore for the time being, to cause copies of the said reports to be forwarded forthwith to the editor of the American Farmer, to be by him published for the information of the people of this state. And if any inspector shall refuse to comply with the directions of the aforesaid last section, upon conviction thereof, he shall pay a fine not exceeding one hundred dollars, to be applied to the benefit of the county in which he is an inspector. And it shall be the duty of the treasurer of the western shore for the time being, to give notice to the judges of the county courts of said counties or Baltimore city court, as the case may be, to be by them submitted to the grand jury, of all such omissions.

Treasury Office,
Annapolis, Jan. 15th, 1823.

Sir,

In compliance with the provisions of an act of December Session 1821, Chapter 194, Section 11. Entitled a further supplement to the act entitled an act, to regulate the Inspection of Tobacco I transmit herewith copies of several reports received from Inspectors of Tobacco, as stated below, which you will please have published in your paper, in conformity to the directions of the said act.

I am, Sir,
Very respectfully,
Your obedient servant,
B. HARWOOD, T. W. S. Md.

To the Editor of the American Farmer,
Baltimore.

Baltimore, January 6th, 1823.

A report of the Tobacco Inspected at and delivered from Calhoun's Inspection Warehouse, during the quarter commencing on the sixth day of October, in the year eighteen hundred and twenty two; ending on the sixth day of January in the year of eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Reinspected.	Total.
Number inspected.	2000	62	266	hhds. 2328
Number delivered.				1405

Treasury Office, Jan. 14th, 1823.

True copy from the original report on file in this office.

B. HARWOOD, T. W. S. Md.

Baltimore, Jan. 6th, 1823.

A report of the Tobacco Inspected at and delivered from Smith's Inspection Warehouse, during the quarter commencing on the 6th day of October, in the year eighteen hundred and twenty-two ; ending on the sixth day of January, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Reinspected.	Total.
Number inspected.	337		23	hhds. 367
Number delivered.	141			141

RODK. DORSEY, Insp.

Treasury Office, January 14th, 1823.

True copy from the original report on file in this office.

B. HARWOOD, T. W. S. Md.

A report of the Tobacco Inspected and delivered from the Indian Landing Inspection Warehouse, during the quarter commencing on the seventh day of October, eighteen hundred and twenty-two, and ending on the sixth day of January, eighteen hundred twenty-three.

	Domestic growth.	Growth not of this state.	Reinspected.	Total.
Number inspected.	3			hhds. 3
Number delivered.	11			11

WM. H. BALDWIN, Insp.

Treasury Office, Jan. 14th, 1823.

True copy from the original report filed in this office.

B. HARWOOD, T. W. S. Md.

AMERICAN GRAPES AND WINE.

To the enquiry made of Mr. Adlum, through the National Intelligencer, and from that paper copied into the last Farmer—the following answer from Mr. Adlum, has since appeared in the Metropolitan.—Ed. Am. Farmer.

To the Editor of the Metropolitan.

Sir—I observe in your paper of yesterday, a communication from J. C. B. taken from the National Intelligencer, in which he says, "In the "years 1820 and 1821 I made a small quantity of "wine from the native grape. My method I think "a very imperfect one, not yielding a gallon of "juice to the bushel of grapes."—I presume Mr. J. C. B. must have used the small autumn, by some called the chicken or pigeon grape, from which, on account of the number of their seeds, *a gallon of juice cannot be expected from a bushel.* But if he had the large growing fox grape, they will not part with their juice either from their skin or pulp without fermentation—if they are bruised or the skin merely broken and put into a tub covered with a blanket and suffered to ferment from three to six days, (according as the weather is warm) and until the whole pulp is dissolved, and also the colouring matter in the skin, and the juice drawn or pressed off—I am much mistaken if a bushel of bunches will not yield from two and a half to three gallons of juice—one bushel of my Miller Burgundy weighed in the bunches thirty six pounds, the Schuylkill Muscadell and Constantia each weighed forty eight pounds in the bunches, and a bushel of them when picked off the bunches, weighed sixty-one pounds; a bushel of the Tokay weighed fifty and a half pounds in the bunches, and when picked off a bushel weighed sixty-five pounds—I had about one acre in bearing, but I only measured, with care, four tenths of an acre, which produced sixty-five and a half bushels of bunches, and they yielded near or about three gallons of juice to the bushel, and it cannot be expected that a bushel weighing 34 or 36 pounds will yield as much juice as those that weigh from 48 to 50 pounds.

Our small autumn grapes generally weigh from 31 to 34 lbs. the bushel, and the large growing fox grapes weigh from 44 to 48 pounds in the bunches; this difference in each kind I suppose is owing to their state of ripeness, or to the difference of the quantity of sugar contained in them

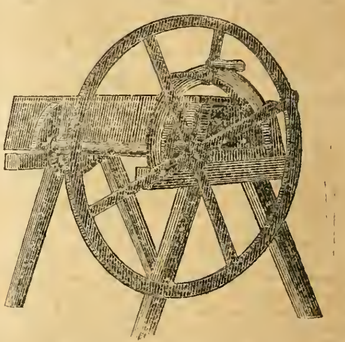
As I am preparing a memoir, in which my practice, as also the best I could collect from others, for the planting of the vine, &c. until the wine is fit for use, as well as the management of our wild grapes, it is unnecessary to comply with the gentleman's wish at present, with respect to my mode of making wine, &c.

January 15th, 1823. JOHN ADLUM.

P. S.—If Mr. J. C. B. should visit Washington or George Town, and will favour me with a call, I can give him a taste of the wine made from the wild grape as well as the cultivated ones, both of which I think tolerable ; and would at the same time answer any queries he may make. J. A.

DAYTON'S PATENT STRAW CUTTERS, IMPROVED.

These are now made in a durable manner, and we believe that they would be found very useful and satisfactory, whenever the number of cattle to be fed, or the description of fodder to be cut, did not require more powerful, or more operative machines. We have seen one of them cut three pecks of straw in a minute ; the only trial of it that we have witnessed, and in this the operator made unusual efforts ; but we presume any one could easily make it cut straw at the rate of half a bushel per minute.—*Ed. Am. Farmer.*



This is considered one of the best machines for cutting Straw or top Fodder, that we have in this part of the country, for the price, (say $20.) The person who cuts the straw, has nothing to do but to turn the wheel after the straw or fodder is put into the box. The feeding works are so constructed as to bring forward the straw a proper distance ready to be cut by the semi-circular knife, at each revolution of the fly-wheel. The knife cuts with great ease and despatch. The straw is brought forward in the most simple manner, by means of a roller fixed under the hind part of the box, to which is attached a cord, that passes along the under side of the box over a small pully, placed near its front end, then returns along the inside of the box, but under the straw, and is attached to a small perpendicular transverse board, that slides from the end of the box towards the front, when put in motion by the cord, and thus forces the straw forward at every turn of the wheel.—The roller is moved by means of a screw fixed near the hindmost end of the fly-wheel shaft, so as to turn a cog wheel that is placed on one end of the roller.

This machine has been much improved since I purchased the patent right for this state. Instead of the wooden, I have introduced an iron fly wheel; and the screw and cog wheel on which the feeding movement chiefly depend, are now made larger, and permanent. I shall still continue, however, to make some as formerly with the wooden fly wheel, in a durable manner, at $15.

I may now inform my friends and the public that I am sincerely thankful for the very liberal patronage which I received the last year; and as I am gradually enlarging my establish-

ment, and increasing its variety, I hope to deserve the continuance of their favours. My stock consists of ploughs, cultivators, wheat-fans, straw-cutters, &c.; together with a general assortment of smaller implements, such as shovels, spades, hoes, picks, mattocks, hay and dung forks, scythes, grain cradles, &c. &c.

I have lately received a general assortment of fresh and good garden seeds, which, together with those that I have had raised, and what I expect from London by the ship Belvidera in next month, will make my assortment very complete. I have also a general assortment of grass seeds. The prices of these are liable to great fluctuations, owing to excess of demand, or scarcity. But my prices will ever be as moderate as possible—and at present they are for Red clover seed, $8—Orchard grass, $3 50—Herds grass do. $3—Timothy do. $5—Millet, $2—all of the first quality.

As my whole time is necessarily occupied in the store and manufactory, I find it not only very inconvenient, but difficult and expensive to collect small sums from persons who live in the country, which places me under the necessity of determining not to sell upon credit in future to such persons.

ROBERT SINCLAIR.

Ellicot street, Pratt street
Wharf, Baltimore.

JEU D'ESPRIT—THE TREAD MILL.

REFLECTIONS, METAPHYSICAL, PHYSIOLOGICAL, AND MORAL, EXCITED DURING A PROTRACTED COMMITMENT TO THE LABOUR OF THE TREAD MILL.

> "Down! thou climbing sorrow!"
>
> *Lear, act* 2, *scene* 4.

In order to introduce myself with due formality to the humane reader, I have to observe that I was found guilty of the crime for which I was arraigned—in the emphatic language of the Recorder, "after a patient and impartial trial, by the testimony of respectable and unvarying witnesses, by a mild and intelligent Judge, and by a merciful and considerate Jury;" and was sentenced to six months hard labour in the Tread Mill. My first appearance on those boards was in March last. On the evening previously to my *debut*, the keeper came to me and said, that on the following morning, at half-past seven, my attendance would be required in company with other performers. There is always considerable interest produced by new situations and modes of employment; and on that occasion the interest partook more of alarm than of curiosity. My inquiries were directed to ascertain if there required, any particular talent to comprehend, or dexterity of limb to execute, the task that had been assigned. The keeper assured me that the performance was adapted to the meanest capacities: "Sir, it only consists in putting the best foot foremost; you have only to consider yourself in a marching regiment—it requires no previous study;" adding, that in one particular it might be compared to swimming, which is never *forgotten:* and that the latter result was the object of the contriver. At the appointed hour in the morning, I ascended a few steps which conducted me to my appointed station on the Mill.—Our society was select, and clad in the same uniform; and it gave me sincere pleasure to find that neither competition nor jealousy existed, although we all wore the yellow stocking. A profound silence was maintained for the first three hours, when the person who worked on my right hand said, "They intend to convert this into a corn mill." The person on my left, overhearing him, replied, "It is a cursed contrivance for corns; my feet are blistered already." Throughout the toilsome travel of the day I observed, with satisfaction, that no man made a false step. At half past four in the afternoon the day's performance concluded.

By degrees I became better acquainted with my associates, the majority of whom concurred in reprobating the invention; they considered it impossible to effect a moral reformation by teaching a man to be a footpad. But there were some so physically callous and morally unrelenting, that the discipline seemed to make not the slightest impression on their bodies or minds. A fellow, who was a lamp-lighter, laughed at the labour; he said it was much easier than his own trade, and he should consider the period of his commitment as an holiday. A short thick-set lad, who was a pot-boy, declared that drawing beer all day and the greater part of the night was much more fatiguing. A chimney-sweeper said, it was a clean and genteel profession; and a Radical affected to admire the invention, because it proceeded on revolutionary principles. A humourous chap, who was classically educated, and had a poetical turn, called the Mill the *gradus ad Parnassum*, and the labour, scanning. Suffice it to say, that the same unvarying and monotonous rotation continued during the period of my commitment.

It now remains to communicate the reflections that occurred while I was a working bee in this hive of reform. For the first week the treading was distressing, and accompanied with considerable pain and stiffness in the calves of the legs and muscles of the thighs; this, however, gradually diminished, and in the course of a month I performed the labour with alacrity, and only viewed it as a species of training. The appetite was much increased; but for this salutary symptom there was no extra provision, the means of satisfying the increase being denied. As the toil proceeded, the thread of life was spun from a staple progressively finer; and when the six months had expired, a very delicate filament appeared to connect together the body and the soul. This labour, with restricted diet, would be a certain remedy in cases of obesity; and the Mill might be safely recommended to the Court of Aldermen and their deputies; masters and wardens of companies; churchwardens, overseers, and sidesmen; butchers' wives, and landladies in the districts of Wapping.

That the Tread-mill, under proper regulations, may become a valuable agent in the cure of chronic disorders, there is every reason to expect; and it is to be hoped that valetudinarians may be accommodated with some establishments for this purpose. In wet weather, under proper shelter, sufficient exercise might be taken in the open air without the chance of catching cold; and as the circular wheel resembles the cylinder of a hand-organ, a trifling expense would furnish a set of delightful tunes, commencing with solemn adagios, and progressively advancing to the gayer movements of a waltz. Time, and the rapid march of intellect, will at some future period develope the improvements of which this salutary engine is susceptible.

The effects produced on the mind by the operation of the Tread-mill are highly interesting, and deserve to be accurately communicated. Although it may be described as the dull unvaried toil that excruciates the spirit and renders the passing moments tiresome and disgusting, yet it has very peculiar effects on the intellectual powers. As perception is in a great degree quiescent, there are abundant opportunities for reflection. The eye dwells only on the boards that form a paling to intercept the view; conversation is prohibited, so that the ear is unoccupied except by exclamations, short sentences, or curses,

> "Diverse lingue, horribili favelle,
> "Parole di dolore, accenti di' ira."
>
> *Dante, Inferno. Canto* 3.

Independently of the strict injunction to preserve silence, there is a physiological reason for the stillness that prevails; in all states of exertion where the labour exhausts the strength, *mum* is the order of the day—the respiration is too actively employed to permit a sufficient supply of breath for continued articulation. That faculty of the mind which is termed attention becomes wonderfully improved, and in consequence the memory is enabled to revert to the former incidents of life with the greatest accuracy, and keep the immediate subject of thought steadily in contemplation. One of my comrades, who was a strolling player, rehearsed many parts while in the act of treading, and, by his own account, with greater facility than he had ever done before; and this he explained, by ascribing it to the relief he experienced while "plodding" round about "his weary way," in fixing his attention on those dramatic scenes with which he had heretofore stored his memory. He pleasantly called it learning *by rote.*

The reader and the public will now expect that I should detail the practical operation of this discipline and intended castigation on the moral character; and this explanation I will cheerfully give, as far as its effects on myself and others with whom I have conversed may be considered a fair criterion. It is supposed that idleness is the source of vicious propensities, and inferred that a return to industrious habits will engage the mind in honourable pursuits. This is the ordinary mode of reasoning; but it is founded on false premises. The life of a thief, so far from being inactive, is a series of vigilant, laborious, and hazardous enterprizes. He is compelled to exert his faculties in the contrivance of stratagems to circumvent the most wary, and to elude the pursuit of justice.* When other mortals are at rest, and enjoying the blessings of sleep, he prowls about, regardless of the inclemency of the weather, and conceals himself in ditches that he may spring upon the traveller. If employed in the fabrication of bank notes, or in counterfeiting the coin, his exertions are more laborious and longer continued than those of the honest artisan. Cupidity is the stimulus to his unremitted toil, and the fear of surprise and apprehension banishes the refreshment of sleep. Ever on the alert to avoid detection, he is compelled to seek by-paths, and traverse immense tracts, that he may more effectually screen himself from danger; he shuns the garish eye of day, and often fasts till nature is nearly exhausted. When there is a reward proclaimed for his caption, he views his own species with distrust, knowing that the thirst of gain will induce even his associates to betray him; and he feels that he can no longer confide in the wretched female on whom he has lavished his plunder. Mankind appear to have conspired against him, and he regards his fellow as an antagonist. It is not idleness that is the cause of his delinquency, for the propensity to thieving, in all its departments, is a stimulus that constantly goads him to practice; it is the eagerness to attain promptly that which he considers the object of his wishes—the desideratum that appears to constitute his immediate happiness. A child steals gingerbread—a schoolboy robs an orchard. When the sexual feelings are developed, the incentive to gratification is increased, and urges to more hazardous attempts. The apprentice drains his master's till, or appropriates the money he has collected in his service to decorate his person, that he may indulge with greater facility in some low amour. The exhilaration kindled by fermented liquors, or the produce of distillation, presents a new source of pleasurable feeling. Under the influence of wine, the bashfulness and timidity inseparable from chastity and decorum are utterly dispersed; the tongue acquires extraordinary facilities of expression, scorns confinement to the dullness of fact, and sallies into the gayer regions of falsehood and imagination.

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* *Hence the Laws of Lycurgus, which encouraged theft, if adroitly committed.*

Among all the conveniences that can be enumerated, especially with the community to which I belong, a lie is justly entitled to the preference. It is an indispensible requisite in the character of a thief, and has presented abundant scope for the ingenuity of gentlemen of the long-robe to detect it by cross-examination. Its excellence depends on the readiness with which it is produced, and on the unblenching effrontery with which it is maintained. Young beginners generally hesitate, colour up, and look down; the eye of a proficient rivets your attention by a point-blank regard. The emoluments of all professions and the profits of trade are founded on this convenience; and the science of producing belief in the mind of another, delicately termed persuasion, is the true "*moyen de parvenir.*" Thus the desire of gratification produces the activity which distinguishes the restless life of a rascal.

Speaking from the moral benefits I have derived from this Mill, my expectations are not raised to any high degree; it may in the outset be felt as a punishment, but this, like the nap of a new coat, soon wears off, and by habit becomes merely a salutary exercise. It may possibly be employed with advantage for the correction of beggars, who are really idle; but to reform thieves it is wholly inadequate. It tends to confer no character, and operates by degradation. Personally, I feel that I have performed my task; it is no employment by which, when at large, I can obtain a living. I was discharged in a state of destitution, and must continue the practice of peculation to subsist. My principles are unaltered, and I am condemned to herd with the most abandoned of my species. In the lapse of forty years I have been an inhabitant of the various prisons, repeatedly tried at the different assizes, often whipped in the press-yard at Newgate, and more publickly at the tail of the tumbril. Once my stubborn neck has bowed in the pillory, and my gills bear the record of incandescent iron. I have been twice transported, and now with philosophic composure, as the boon of approaching age and infirmity, wait my turn at the gallows

— "nullum
Sæva caput Proserpina fugit."

LAURENCE LARCENY.

Literary Gazette, Nov. 9.

The Curing or Preservation of MEAT; with thoughts on the causes of Rust.

Elmwood, January 10th, 1822.

Dear Sir,

We had some conversation lately about the yellow rust, that is so disagreeable in bacon; and I referred you to a paper in your Farmer, vol. 2, on that subject. To the causes there assigned, I have to add another, that I did not know of then; and perhaps it is the most general, viz: the moisture and closeness of the meat house. I was led to this discovery by keeping some meat, that was ready for smoking, three weeks in a close house built on the ground; and before *one* fire was kindled, it was becoming rusty. Salting and drying are the two methods of curing meat—and a proper combination makes our best bacon. The addition of smoke, I consider as merely a flavour, notwithstanding what great chemists have said about rubbing on a little pyroligneous acid to cure meat. The Londoners, I am told, have no smoke houses; they simply dry their meat in the kitchen. Meat that is excessively salted by laying very long in plenty of salt, as also such as is excluded from the air, as barreled pork, is not apt to grow rusty, but by very long keeping. Hence it follows, that our nicest meat is most in danger; and the pieces we salt least are the most apt to be rusty, viz: chines, joles and middlings. Hams are the least liable, because kept longer in salt, and more protected by skin. There can be no doubt that meat kept so long moist, will have some of the salt on the surface carried off by the air, taking up the saline moisture, which is soon collected again;* whereas, when it is dried quickly, the reverse happens, for the decrease in the volume of the meat will condense the salt, and it will crystalize on the surface. I think our small pieces would do best to be first dried in a kitchen, and then smoked four or five days at most. Smoke will flavour and colour rapidly when the meat is dry. All meat houses should be constructed so as to be dry and airy. None should be in immediate contact with the ground—but here lies a difficulty, yea, a double difficulty: flies and rogues may enter with the air. I have had a lattice door hung inside my strong door, which latter is shut at dark; and as soon as a fly can shew his head, by which time the meat will be cured, I shut all up so close, that one fly cannot see another. This I have found in all places and cases, the only infallible preventive against skippers. Those who continue the light of even four inches square, must put their meat up early in March into bags, or give it a disagreeable dressing with ashes, if they expect to be the only feasters on this gentile delicacy.

Perhaps an opening in the floor of the house, with a grate and wireing, would be more eligible than a lattice door; and if the foundation was well stoned all over, and the house elevated a few inches from the ground, it would be rogue proof; but perhaps even six inches might be too high; for these gentry are very much of the serpent kind, and might flatten out for the moment, to secure a good distention with such tempting stuff.

Such smoke houses as are built over other houses, should have a large flue from the bottom, but the fires should never be put there, or the meat will keep damp—and moreover have a bitter taste—for the warm smoke will be condensed on the bacon by the relative coldness. This I have experienced.

There is much dispute with house keepers whether we should smoke in damp seasons, when the meat is dripping. I consider it safest *not* to smoke; for if you do not succeed in drying it, which can hardly be done so quickly, you will injure the meat much more than the weather will.

SILVANUS.

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* *Some chemists might deny the salt being carried off in this way, but they have only to look at a brick house near the coast to be convinced; there they will see the salt* 100 *feet or more, above the water level.*

HOLLY BERRIES—WOULD, THEY NOT AFFORD A USEFUL OIL.

Salisbury, N. C. Dec. 29, 1822.

J. S. Skinner, Esq.

Dear Sir—Would not the berries of Holly make a useful oil, to answer all or some of the purposes of olive oil? If any of your correspondents are acquainted with the Holly berry and its properties, they would confer an obligation, by making it public through the medium of your paper. I have been led to this inquiry by seeing some thrown in a fire, a day or two ago, which appeared to possess, from the manner of their burning, a quantity of oil.

In haste, your obedient servant,

THOS. CHAMBERS.

THE FARMER.

BALTIMORE, FRIDAY, JANUARY 24, 1823.

In this paper we record the first report from the Treasurer of the State, of the returns made to him by some of the Inspectors, under the new Inspection law. The absence of reports from other Inspectors, probably, arises from inadvertence, or from an opinion that the law had not yet taken effect in that particular.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $7 25—Howard st. Superfine, $6 87½—Wharf, do. 6 12½—Wheat, white, $1 35 to 1 40—Red do., $1 27 to 1 30—Rye, 71 to 75 cents—Corn, 62 to 65 cts.—Oats, 35 to 37½ cents—Beef, live cattle, $5 to $5 50 per cwt.—Beef, 8 cents per lb. —Bacon, round, 10 to 11 cts.—Pork $4 50 to 5 50 per c lb.—6 to 8 cts. per lb.—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $8—Orchard Grass do. $3 50—Herds' Grass do. $ —Timothy do. $5—Millet, $2—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons, 32 to 36 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, none in market—Herrings, No. 1, $3 62½ per bbl.—No. 2, $3 37½—Fine salt 80 to 90 cts. per bush.—Coarse, do. 75—Butter, 20 to 25 per lb.—Eggs, 25 cts. per doz. —Turkeys, 75 cts. to $1—Geese, 37½ to 50 cts. Chickens, $1 50 per doz.—Straw, $12 50 to 13 per ton—Hay, $17.

Maryland Tobacco—Of the fine qualities, *none*—Good red, $8 to 10—Common do. $5 to 7—Dark brown, $3 to 4—Second do., $2 to 5—all in demand.

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THE AMERICAN GARDENER

CHAPTER IV.

Vegetables and Herbs.

199. BROCOLI.—This plant is not much cultivated in America ; and, indeed, scarcely at all. In England it is grown in great quantities, especially near London. It is there sown in the spring, and eaten in the fall and during the winter, even until spring. It is of the nature of the *Cauliflower*, which see. One sort has a whitish head, and is like a cauliflower, except that the white is a *yellow-white*. Another sort has a *purple* head ; and there is another of a *greenish* hue. It is cultivated, in all respects like a Cabbage (which see) ; but, as it is *lorge*, it must be placed at wider distances, not less than two feet and a half each way. If raised *very early* in the spring and planted out in June, and in good ground, as *cool* as can be got, it will have heads in *October ;* and, if any of the plants have not then perfected their heads, when the *hard* frost is coming, they may be treated like those of the spring sown cauliflowers which have not perfected their heads at this season. *Fifty* of this plant, for the fall, may be enough ; and they ought to be planted out in the *South Border* in order to be kept as cool as possible. The *white* sort is deemed the *handsomest ;* but, the others are *more hardy*.—To have Brocoli *in the spring ;* that is to say, in *May* (for New York) is *the thing !*—The thing *may* be done ; for I had some pretty good in May 1818.—Sow in *June*. Transplant in July ; put the plants at 2½ feet apart. Till well between ; and earth up the stems of the plants in August. They will be very tall and stout, in good ground, in November ; and a sharp frost or two will not hurt them. But, to keep them *through the winter* is a troublesome thing. Nevertheless, to have them at New York or Boston *in May*, and, at Philadelphia late *in April ;* to have something little short of a cauliflower at that season is worth some trouble, and even some expense ; for, at that very season, the people of New York, are carrying home *wild dock leaves* from *market*, bought at three or four cents a handful ! This is the way to go to work to have Brocoli at this season. *Five rows*, across one of the *Plats* in the garden, will contain 110 plants. The space they will occupy will be 56 feet long, and 10½ feet wide from out-side row to out-side row. Now, *all this space* must have *a covering* during the time that the ground is completely *locked up* by the frost. And this is the way to cover it. Before the ground be hard frozen, put some *stout* stakes in the ground on both out-sides of the out side rows, and at about a foot from the stems of the plants, Let these stakes be about a foot higher than the *tops of the leaves* of the plants ; and that will make the stakes about four feet high. Let these stakes (which should not be less than three inches through) have a *fork* at the upper end to lodge a pole upon to go from stake to stake *across the plantation*. That these poles may not bend in the middle, by and by, when the covering is put on, put another row of forked stakes along the middle, or near the middle of the plantation. From out-side row of stakes to out-side of stakes will be twelve feet and a half. The stakes are to be four feet asunder in the long rows, and they will be about six feet asunder across the plantation. Lay *stout* poles across, and let each pole rest in the forks of the three stakes. Then tie some stout *rods* longways upon the poles, at about nine inches from each other. Then some small rods across them at nine inches from each other. Then tie small rods along the sides and at the ends from stake to stake, nine inches apart, and upright rods against these, nine inches apart. Thus you have a sort of net-work over the whole plantation. And, there let it stand, till the rains are over, and until the winter is *fairly set* in, which at New York, may be about Christmas. When all is frozen *hard up*, cover *close* over the lattice work a foot thick with straw, at the *least*, and lay on something to prevent the straw from moving. Then *set up* straw, or corn stalks, against the sides and the ends of the erection. Place the straw or stalks a foot thick at least, and fasten them well up, so as to keep out, not the frost but *all light* and all occasional *thaws* from entering. Thus let the whole remain till the *breaking up* of the frost : and then *take all away*. Do not wait till the frost is *out of the ground ;* but, take away as soon as the grand *breaking up* comes. You will find the plantation as *green* as it was when you closed it up. This will be about the middle of March (Long Island ;) and though there will be many and sharp frosts after this, these will not injure the plants. As soon as the ground is *dry at top*, hoe *deep* amongst the plants ; hoe again in about ten days ; and again in another ten days ; and, about the *first week in May*, or in the second at latest, you will *begin* to cut Brocoli to eat. The heads will come in one after another ; and, recollect, that you have 110 heads, which is nearly 4 *a day for a month*' ; and this, you will observe, at a season, when people are glad to *buy* dock-leaves to eat ! When we talk of *trouble*, what is trouble but *labour ;* and what is labour but a thing to be *bought ?* I am supposing a case where a *gardener* is kept ; and, pray, what has he else to do ? But, suppose a man to be hired expressly, would he not go to the wood and get the materials and make the lattice work in *a day ?* Would it take him more than another day to lay on the straw ? Here, then, are *two dollars ;* and, supposing the straw and the stakes and poles and rods to be *bought*, the straw would be nearly as good for litter afterwards, and the poles, stakes and rods would last for many years, if tied up in bundles and laid safely away from winter to winter.

200. BURNET is a well known grass, or cattle plant. It is used by some in salads. When bruised, or cut, it smells like *cucumber*. It is a perennial, and a very poor thing.

201. CABBAGE.—The way to raise Cabbage Plants in a *hot-bed* has been given in Paragraphs 77 to 96.—In the open ground you may put your seed rows at six inches distance, and put the seeds *thin* in the row. As soon as up, thin the plants to three inches in the row. The next thing is *transplanting ;* and I will speak of that before I speak of seasons, sorts, and preserving during winter.—Of the preparation and state of the ground, and of the proper weather, for transplanting, I have spoken in Paragraphs 169 to 175. Read those paragraphs carefully again, and bear their contents in mind. But, to have *fine* cabbages, of any sort, the plants must be *twice* transplanted. First, they should be taken from the seed bed (where they have been sown in drills near to each other,) and put out into fresh-dug, well broken ground, at six inches apart every way. This is called *pricking out*. By standing hereabout fifteen or twenty days, they get straight and strong, stand erect, and have a straight and stout stem. Out of this plantation they come nearly *all of a size ;* the roots of all are in the same state ; and, they strike quicker into the ground where they are to stand for a crop.—But, if you do not, whether from negligence or want of time, prick your plants out, choose the strongest, if you do not want them all ; and, at any rate, do not plant strong and weak promiscuously, but put each by themselves. If you do not *intend* to prick out, leave the plants, *thinner* in the seed bed, and hoe deep between them while they stand there. Besides this you may pass a *sharp* spade along under the rows, and cut off the tap-roots ; for they must be shortened when the plants are transplanted. This, if done a week or ten days before transplanting will give the plants a more *bushy root ;* and will, in some measure, supply the place of pricking out.—Having the plants ready for transplanting ; and having the ground and weather as described in Paragraph 170, you proceed to your work, thus : *dig* the plants up, that is, loosen the ground under them with a spade, to prevent their being stripped too much of their roots. Put them in *rows* of course. The *setting-stick* should be the upper part of a spade or shovel handle. The eye of the spade is the handle of the stick. From the bottom of the eye to the point of the stick should be about nine inches in length. The stick should not be *tapering ;* but nearly of equal thickness all the way down, to within an inch and a half of the point, where it must be tapered off to the point. If the wood be cut away all round, to the thickness of a dollar, and *iron* put round in its stead, it makes a very complete tool. The iron becomes bright, and the earth does not adhere to it, as it does to wood. Having the plant in one hand, and the stick in the other, make a hole suitable to the root that it is to receive. Put in the root in such way as that the earth, when pressed in, will be on a level with the butt-ends of the lower, or outward leaves of the plant. Let the plant be rather higher than lower than this ; for, care must be taken not to put the plant so low as for the earth to fall, or be washed, into the *heart* of the plant, nor even into the inside of the bottom leaves. The stem of a cabbage, and stems of all the cabbage kind, send out roots from all the parts of them that are put beneath the surface of the ground. It is good, therefore, to plant as deep as you can without injury to the leaves.—The next consideration is, the *fastening of the plant in the ground*. I cannot do better than repeat here what I have said in my Year's Residence, Paragraphs 83 and 84 : "The hole is made deeper than the length of the "roots ; but the root should not be *bent* at the "point, if it can be avoided. Then, while one "hand holds the plant, with its root in the hole, "the other hand applies the setting stick to the "earth on one side of the hole, the stick being "held in such a way as to form a sharp triangle "with the plant. Then, pushing the stick down, "so that its point go *a little deeper than the* "*point of the root*, and giving it a little *twist*, "it presses the earth against the *point*, or *bottom* "of the root." And thus all is safe, and the plant is sure to grow. The general, and almost universal, fault, is, that the planter, when he has put the root into the hole, draws the earth up against the *upper part* of the root, and, if he press pretty well there, he thinks that the planting is well done. But, it is the point of the root against which the earth ought to be pressed, for there the fibres are ; and, if they do not *touch the earth closely*, the plant will not thrive. To know whether you have fastened the plant well in the ground, take the tip of one of the leaves of the plant between your finger and thumb. Give a pull. If the plant resist the pull, so far as for the bit of leaf to come away, the plant is properly fastened in the ground ; but, if the pull bring up the plant ; then you may be sure that the planting is not well done. The point of the stick ought to twist and press the earth up close to the *point of the root ;* so that there be no *hollow* there.—Pressing the earth up against the *stem* of the plant is of little use. As to *distances* they must be proportioned to the size which the cabbages usually come to ; and [illegible] difference of soil out of the question, varies with the *sort*. However, for the very small sorts, the *Early Dwarf* and Early *Sea Green*, a foot apart in all directions is enough ; for there is no occasion to waste

garden ground ; and you do not want such things to stand long, and the plants are in plenty as to number. The next size is the *Early York*, which may have 16 inches every way. The *Sugar loaf* may have 20 inches. The *Battersea* and *Savoy* two feet and a half. The large sorts, as the *Drum-head* and others, 3 feet at least.—Now, with regard to *tillage*, keep the ground clear of weeds. But, whether there be weeds or not, hoe between the plants in ten days after they are planted. The reasons for this are amply stated in Paragraphs 176 to 186. You cannot *dig* between the plants, which stand at the smallest distances ; but you may, and ought, to dig once, if not twice, during their growth, between all the rest. To prevent a sudden check by breaking all the roots at once, in hot weather, dig *every other interval*, leave the rest, and dig them a week later. All the larger sorts of cabbages should, about the time that their heads are beginning to form, be *earthed* up ; that is, have the earth from the surface drawn up against the stem ; and, the taller the plants are, the more necessary this is, and the higher should the earth be drawn. After the earth has been thus drawn up from the surface, *dig*, or *hoe deep*, the rest of the ground.—Thus the crop will be brought to perfection.—As to *sorts*, the earliest is the *Early Dwarf* (sometimes called the *Early Salisbury ;)* the next is the *Early Sea Green*; then comes the *Early York*. Perhaps any one of them may do ; but the first will head ten days sooner than the last. The *Sugar-loaf*, sweetest and richest of all cabbages, if sown and transplanted when Early Yorks are, will head nearly a month later. It is an excellent cabbage to come in, in July and August. Some sown three weeks later will carry you through September and October ; and some sown in June and transplanted in July, will carry you on till Christmas. For the winter use, there really needs nothing but the *Dwarf Green Savoy.* When good and true to kind it is very *much curled* and of a *very deep green.* It should be sown as soon as the ground is at all warm, and planted out as soon as stout enough. By November it will have large and close heads weighing from 5 to 8 pounds each. This is the best of all winter-cabbages. If you have *Drum-heads*, or other large cabbages, the time of sowing and that of transplanting are the same as those for the Savoy. But, let me observe here, that the early sorts of cabbage keep, during winter, as well as the large, late sorts. It is an error to suppose, that those cabbages only, which will not come to perfection till the approach of winter, will *keep well.* The Early York, sown in June, will be *right hard* in November, and will keep as well as the Drum-head, or any of the *coarse* and *strong-smelling* cabbages. The Early Yorks are not so *big* as the Drum-heads ; but, observe, that as the former require but 16 inches distance, and the latter 3 feet, *five* of the former stand on the ground of *one* of the latter So that, perhaps, the Early Yorks will be the largest *crop* after all. I have tried the *keeping of both :* and I know, that the fine cabbages keep as well as the coarse ones. The *Red Cabbage* is raised and cultivated in the same season and same manner as the *Green Savoy.*—There are many other sorts of cabbage, early as well as late ; and they may be tried ; but those above-mentioned are certainly sorts enough for any family.—The *preserving* of cabbages during the winter is all that remains to be treated of under the word cabbage ; but as every reader must know, it is a matter of great importance ; for, on it depends the supply of cabbages for *four months* in the year, North of Virginia and South of Boston, and for *six* months in the year when you get as far North as the Province of New Brunswick.—The *cellar* is a poor place. The *barn* is worse. The cabbages get *putrid* parts about them. If green vegetables be not fed from the earth, and be in an unfrozen state, they will either *wither* or *rot.* Nothing is nastier than *putrid* cabbage ; and one rotten cabbage will communicate its offensiveness to a whole parcel. *Pits* you cannot open in winter. To *turn the heads* down and cover them with earth while the root stands up in the air, is liable to the same objection. The cabbages are pretty safe ; but you cannot *get at them* during the winter. I have tried all the ways that I ever saw practised, or that I ever heard of; the following method I found to answer every purpose: it is the surest preservation, and gives the least trouble, whether in the putting together or in the taking away for use.—Lay out a piece of ground, four feet wide, and in length proportioned to your quantity of cabbage to be preserved. Dig, on each side of it, a little trench, a foot deep, and throw the earth up on the four-feet bed. Make the top of the bed level and smooth. Lay some poles, or old rails, at a foot apart, long-ways, upon the bed. Then put some smaller poles, or stout sticks cross ways on the rails or poles, and put these last at five or six inches apart. Upon these lay, corn-stalks, broom-corn stalks, or twigs or brush of trees, *not very thick*, but sufficiently thick just to cover all over. Make the top flat and smooth. Then, just as the frost is about to *lock up* the earth, take up the cabbages, knock all dirt out of their roots, take off all dead or yellow looking leaves, and some of the out side leaves besides ; put the cabbages, head downwards, upon the bed, with their roots sticking up ; and cover them with straw so thick as for the straw to come up nearly to the root of the cabbage. Do not pack them quite close. It is better if they do not touch each other much. Lay some bits of wood, or brush-wood, to prevent the straw from blowing off. If the frost *catch you*, before you have got the cabbages up, *cut* them off close to the ground, and let the stumps, instead of the roots, stick up through the straw.—Out of this stack you will take your cabbages perfectly *green* and *good* in the spring, when the frost *breaks up ;* and to this stack you can, at all times in the winter, go, with the greatest facility, and get your cabbages for use, which you can to no other species of conservatory that I ever saw or heard of. The *hollow* part below the cabbages takes away all wet that may come from occasional rains or meltings of snow ; and the little ditches on the sides of the bed keep the bed itself free from being soaked with wet. Even if deep snows come and lie for months, as in Nova-Scotia, New Brunswick and Canada, it is only removing the snow a little ; and here are the cabbages always *fresh* and good.—Immense quantities, particularly in woody countries, may be stacked and preserved in this way, at a very trifling expense. In fields the side trenches would be made with the *plough ;* poles, in such a case, are of all sizes, always at hand ; and, *small* brush wood might do very well instead of straw, *fir*-boughs, *laurel*-boughs, or *cedar*-boughs, would certainly do better than straw ; and where is the spot in America, which has not one of these three?—*Cabbage Stumps* are also to be *preserved ;* for they are very useful in the spring. You have been cutting cabbages to eat in October and November. You leave the stumps standing, no matter what be the *sort*. Take them up before the frost sets in : trim off the long roots, and lay the stumps in the ground, in a *sloping* direction, row behind row, with their heads four or five inches out of ground. When the frost has just *set in* in *earnest*, and not before, cover the stumps all over a foot thick or more, with straw, with corn-stalks, or with ever-green boughs of some sort. As soon as the breaking-up comes, take off the covering, and stir the ground (as sown as dry,) by hoeing, amongst the stumps. They should be placed in an *early spot ;* in one of the warmest places you have ; and they will give you (at New York) an abundance of fine greens towards the end of April, when a handful of wild *dock-leaves* sells in New York market for *sixpence* York money, which is rather more than an English three pence.——*Lastly*, as to the saving of *cabbage seed.* The cabbage is a *biennial.* It brings its flower and its seed the *second year.* To have cabbage seed, therefore, you must preserve the cabbage, head, root and all, throughout the winter ; and this must be done, either in a *cellar*, or, under covering of some sort out of doors ; for, the root must be *kept in the ground all winter.* It is possible, and, I think, likely, that seed from the *stump* is just as good as any ; but as one single cabbage will give seed enough for any garden for three, four, or five years, the little pains that the preservation can require is not worth the smallest risk. As to the *quantity* of cabbages wanted for a family, it must depend on the size of the family and on their taste.

202. CALABASH. An annual. Cultivated like the *cucumber*, which see.

203. CALE.—This is of the cabbage kind. There are several sorts of it ; and, it is, in all respects, propagated and cultivated like the *Green Savoy*, which see under *Cabbage.*—The Cale does not *head*, or *loave*, but sends forth a loose, open top, which in England, is used after the frost has pinched it, and then it sends out side-shoots from its tall stem, which it continues to do if kept cropped, till May. In mild winter climates it is very useful and pleasant. It does not get rotted by the successive freezings and thawings, as cabbages do. It is always *green* and fresh. Backward planted savoys, may, perhaps be as good ; but the Cale is very good too. It will, I dare say, stand throughout *some* winters as far North as Philadelphia. It is worth trying; for *greens* are very pleasant in winter.—The *Curled* Cale is the best.—Its seed is saved like that of the cabbage.—There is a sort of Cale called *Boorcole*, and a whole list of things of somewhat the same kind, but to name them would be of no use.

204. CALE (Sea.)—This is a capital article. Inferior in point of quality to no vegetable but the *Asparagus*, superior to that in merit of *earliness ;* and, though of the easiest possible propagation and cultivation, I have never seen any of it in America.—It is propagated by *seed*, and also by *offsets.* The seed may be sown, or the young plants (at a year old) planted, or the *offsets* (little shoots from the sides of the stems) planted on the spot where the crop is to be produced.—The mode of cultivation is in *beds*, *precisely the same in all respects as Asparagus ;* except that the Cale may be begun upon the *second* year. Cover the beds *thick* with litter in winter ; so that the frost may not enter very deep ; and, in April (Long Island) you will have plenty.—The moment it *peeps* out, cut it, and you have a white stalk seven or eight inches long, which is cooked just as asparagus is, and is all eaten from top to bottom. This plant is a native of the sea beach ; and is as hardy as any weed that grows. Instead of *earth* you may, if convenient, lay sand (and especially *sea sand)* for it to shoot up through. It may be moved at any age of the plant. Any old stump of it will grow. After you leave off cutting it in the spring, it goes shooting on, and, during the summer it bears seed. In the fall the stalks are cut down, and you proceed with the beds as with those of Asparagus,—Two beds across any one of the plats are enough for any family.—This is, unquestionably (after the Aspa-

ragus) the very best garden vegetable that grows. Sea-Cale may be had at any time in winter, as easily as Asparagus (which see,) and with less care. The roots may be dug up in the fall and thrown under any shed with litter, or straw, over them, till you want them. The earth in the hot-bed must be *deeper* than for Asparagus: that is all the difference.—The seed is saved as easily as that of Asparagus.

205. CAMOMILE is a medicinal herb of great use. It is a perennial, and, though it may be propagated from seed, it is easiest propagated by parting the roots. One little bit of root will soon make a bed sufficient for a garden. The *flowers* are used in medicine. They should be gathered before they begin to fade; and be dried in a gentle sun, or in shade; and then put by, in paper bags, in a dry place.

206. CAPSICUM (or Peppers.)—An annual plant, sown early in fine earth, in drills a foot apart, and at six inches apart in the drills. It is handsome as a *flower*, and its pods are used as a pickle.

207. CARAWAY.—The seeds are used in cakes. The plant is an annual. Sow in the spring, in fine rich ground, and leave the plants eight inches apart each way.

208. CARROT.—Read the Article BEET; for, the same season, same soil, same manure, same preparation for sowing, same distances, same inter-cultivation, same time of taking up, and mode of preserving the crop, all belong to the *Carrot.*—About the same quantity also is enough for a large family.—Some fine roots may be carefully preserved to plant out for seed in the spring; and the seed should be taken only from the *centre* seed stalks of the carrots; for that is the finest. The mark of a good kind of seed, is, *deep*-red colour of the tap. The paler ones are degenerate; and the *yellow* ones are fast going back to the wild carrot. Some people consider that there are *two sorts*: I never could discover any difference in the plants coming from seed of what has been called the *two sort*. A Cow will nearly double her milk, if taken from common pasture in *October*, and fed well on carrot *greens*, or tops; and they may, at this season, be cut off for that purpose. They will shoot a little again before the time for taking the carrots up; but, that is of no consequence. These shoots can be cut off before the carrots be put away for winter. Carrots will *transplant* like Beets; but, they grow still more *forked* than the Beet in this case.—They do, however, grow large and heavy in this way. I have had some weigh more than three pounds.

209. CAULIFLOWER.—It is not without *some* difficulty, that this plant is brought to perfection in any country, where the frost is severe in winter, and especially where the summers are as hot as they are in every part of the United States. Still it *may* be brought to perfection.—It is a *cabbage*, and the French call it the *flower-cabbage*. Its head is a lump of rich pulp, instead of being, as a cabbage-head is, a parcel of leaves folding in towards a centre, and lapping over each other. The Cauliflower is an *annual* plant. It blows, and ripens its seed, during the year that it is sown; and, in fact, the part which is eaten is not, as in the cabbage, a lump of *leaves*, but the *seed stalks*, *pods*, and blossoms in their embryo and compact state, before they expand.—It is the same with *Brocoli*.—Cauliflowers may be had to eat in the fall, or in the spring. The last is the most difficult to accomplish; and I will, therefore, treat first of the means of accomplishing that.—To have Cauliflowers to eat in the spring, that is to say, in June, you must sow them in the *fall*; for, they will have a certain *age* before their heads will come. Yet, they are very *tender*. They will not endure a South of England winter without a *covering*, occasionally at least, of some sort; and the covering is, almost always *glass*, either on frames or in a hand-light. So that, to keep them through an American winter, there must not only be glass, but that *glass* (except where you have a green-house to be kept warm by fire) must have a *covering* in severe weather.—They require *age*, and yet, you must not sow them *too early* in the fall; for, if you do, they will have little heads about the size of a dollar, and go off *to seed* at once without coming to a large head at all. If you be too *backward* in sowing, the heads do not *begin* before the *great heat* comes; and, in that case, they will not head *till the fall*.—All these circumstances make the raising of them for spring use very difficult.—Sow (Long Island) *first week*, or *second week*, in *September*, in the same manner that you sow cabbages. When the plants have *eight leaves*, put them in a warm place in the *natural ground*, and do not put much dung in the ground. The back part of the Hot-bed ground would be the place. Plant them six inches asunder upon a piece of ground that your *frame will cover*; but do not put on the frame, till *sharpish* frosts begin to come. Then put it on, and, whenever you expect a frost, put over the *lights at night*. If there be much rain, keep the lights on, but give plenty of air. Take the lights off whenever you can. When the *hard* frost comes, put long dung from the stable very thick all round the frame up to the very top of it, and extending a yard wide; and, in *severe weather*, cover the glass with a mat, or old carpet first; then put straw upon the mat; and then cover the straw with another mat. But, mind, they must be kept *in the dark* as little as possible. When the sun is out, they must have it; and, in mild days, they must have a great deal of air. When there is an occasional *thawing day*, take the lights *off*, and hoe and stir the ground; for, they want *strength* as well as protection; and they must have all the air you can, with safety to their lives, give them.—Thus you go on till within about *three weeks of the general Indian-Corn planting season*. By this time you may leave the lights off day and night. Ten days before Corn-planting get your ground ready, deeply dug and full of rich manure. Make holes with a spade; remove each plant with a ball of earth about the roots; fix the plants well in the holes at two feet asunder; leave a little dish round each; water them with water that runs out of a yard where cattle are kept. They love moisture, especially under a hot sun. Give them this sort of water, or muddy, stagnant water, every three days in hot weather; hoe and dig between them also; and you will have Cauliflowers in June.—If you have a Green-house, the trouble is little. Sow as before. Put about four plants in a flower-pot a foot diameter at top, instead of putting under a frame. They will live in the Green house like other plants; and will be ready to put out as above-mentioned. Fifty plants are enough. They are very fine vegetables; but they come not earlier than *green peas*.—To have Cauliflowers to eat *in the fall* is a much easier matter, and then they are, in my opinion *more valuable* than in the spring. Sow at the same time and in the same manner as you sow early cabbages. Treat the plants in the same way; put them at two feet and a half distance; you need not now water them; they will begin to come early in October; and, if any of them have not perfected their heads when the *sharp* frosts come, take them up by the root, hang them up by the heels in a *warm* part of a barn, or in a cellar; they will get tolerably good heads; and you will have some of those heads to eat *at Christmas*.—The seed, on account of the *heat*, is extremely difficult to save in America; but, if a fall Cauliflower were kept in a Green-house during winter, and put out three weeks before corn-planting time, I am persuaded, it would bring good seed in June.—The *quantity* of this plant must depend upon the taste for it; but, it is so much better than the very best of cabbages, that it is worth some trouble to get it.

AGRICULTURAL SCHOOLS.

REPORT OF THE COMMITTEE ON AGRICULTURE, TO THE ASSEMBLY OF NEW YORK.

The Committee on Agriculture respectfully beg leave to report, in part—

That your committee consider the important interest confided to their care, as requiring at all times, the fostering aid and protection of the legislature—as well because that agriculture gives employment to five sixths of our population, as that it imparts life and vigour to every other employment in the commonwealth. This duty is rendered the more imperative at this time, from the competition we have cause to apprehend, even in our own ports, from the agricultural productions of foreign countries. The wheat of the Baltic, and the products of the Irish soil, are already imported into our state. The continental peace has converted millions of consumers into cultivators of food. The consequent depression in the price of labor, connected with the superior systems of European husbandry, admonish us of the necessity of adopting measures, in time, to counteract the threatened evil.

When we consider that the imports into the United States during the last year, exceeded the exports of our own productions, seventeen millions of dollars: that our specie and public stocks have been withdrawn from the country towards meeting the deficit; and that still an awful balance is annually accumulating against us in Europe, the inference is irresistible, that we have to choose only between reform and ruin. Among the means calculated to effect reform, your committee consider the improvement of agriculture, by the introduction of improved and profitable systems of husbandry—the protection and encouragement of domestic manufactures—and a rigid economy in every department of the government, as holding a pre-eminent rank, and as entitled to the peculiar consideration of this legislature. As the former of these only, falls within the province of this report, your committee beg leave to explain their views upon this subject at length.

Your committee cannot but regret, that so little has been done to place agriculture upon the footing which its importance merits. We have schools of law, of medicine, and of divinity. We have schools of oratory, of music, and of dancing. And we have a national school for teaching the art of war. The fine arts have their teachers, pupils, and amateurs. The shops of our merchants, mechanics and artizans, are all schools of instruction, where our youth are taught, by system and rule, the particular business which they are to follow. Yet we have no school of agriculture,—a business more complicated in its details, and requiring a greater diversity of knowledge, than any art which is taught. It has been severely, but justly remarked, that we rely on taking *this* the natural way as the devout Mahomedans do the small pox; and regard the tedious process of inoculation on both as useless and sinful. Though agriculture is the parent of the arts, and the mint which coins our wealth, so modest has been its pretensions, so humble its walk, and so feeble its advocates, that its interests have occupied but a subordinate place in the public mind. It remains, at least among us, without system, without principles, without schools, and almost without legislative patronage. Millions are annually expended for the protection of our national commerce. Our manufactures receive a bounty, in some cases extravagantly high, by the imposition of duties upon foreign goods. But our agriculture is left to struggle for itself, against the corn laws of Europe, unprotected and unnoticed.

Agriculture, says an eminent statesman, may be regarded as the breasts from which the state derives support and nourishment. Commerce, the arts, literature, manufactures, and the refinements of social life, nay, the principles of civil liberty, depend materially for their advancement upon the progress of agricultural improvement. "Britain," says a late writer, "has hitherto matched any part of the world, in a knowledge of the arts, and in the practice of trade and manufactures. The origin of that knowledge, and the source of those practices," he continues, "may, in a great measure, be traced to the improvement of agriculture. This art forms the basis, or foundation, on which all others are reared; and as it is more perfect in Britain, than in other countries, commerce and manufactures have risen to proportional excellence" To show the governing influence of agriculture, upon the moral and political condition of society, we have but to turn our eyes to Europe. The Campania of Rome, which once was a garden, and boasted of more than twenty cities, is now a noisome waste; and the character of its few inhabitants have degenerated as its agriculture has declined. Sicily, once the granary of imperial Rome, has, like its mistress. become unproductive, effeminate and debased. And yet the soil of both the Campania, and of Sicily, are celebrated for their fertility. Look to Spain, to Portugal, and to European Turkey. Why have commerce, the arts and learning, languished in those countries for centuries? Because agriculture their nursing mother, has been neglected and degraded.

If, then, agriculture is the fountain from whose abundant streams every portion of our country is watered and enriched,—how important is it that we should watch over it with a paternal care—that we should disseminate its improvements, and endeavour to multiply its blessings;—that we should elevate it to the rank of a liberal and fashionable study, and call in the aid of science, and of approved experience, to enlarge the sphere of its usefulness. To effect these desirable ends, your committee respectfully recommend, that a law be passed, for establishing a school of agriculture, for the education of our young men in the practice and theory of husbandry.

We may be told, that we are venturing on an untried experiment; that we have no precedent to guide us; and, that did schools of agriculture promise important benefits to a state, they would long since have been multiplied in other countries. It should be borne in mind, that the inducements to disseminate knowledge among the agricultural class, are no where so strong as in the United States; and that what is deemed salutary here, may be dangerous on the other side of the Atlantic. There, the few, who constitute the privileged classes, are the proprietors of the soil, and rely, for the preservation of their power and their wealth, upon the comparative ignorance and depression of the many. Here, those who till, are the owners of the soil, and the legitimate depositaries of power; and the purity and permanancy of our political institutions, are based upon their intelligence and virtue. In Great Britain, the want of agricultural schools has been supplied, by individual liberality and enterprize. Many of the great landholders, stimulated by an efficient national board of agriculture, have become active laborers in the field of experiment; and by the application of capital and science, have improved the value of their estates from two to ten fold. The rent roll of the Coke estate, in Norfolk, has in this way been augmented, by its enlightened proprietor, in the period of forty years, from 5,000 to 40,000 pounds per annum, and other districts in a like proportion. And the condition of the tenants would be equally improved, but for the accumulating weight of taxes imposed by the government. Few names stand higher, as public benefactors, than those of Young, Sinclair, Anderson, Marshall, Coke, and others, whose labors and talents have contributed to raise to its present state of excellence, the agricultural character of Great Britain. Yet individual means are found to be inadequate in Britain, and the government is invoked to aid, by large appropriations, in the work of agricultural improvement. "I boast not of any particular patriotism," says the celebrated Watson, bishop of Landaff, "but I would willingly pay my share of twenty or thirty millions pounds sterling of public money, to be appropriated by the legislature, for the agricultural improvement of Great Britain and Ireland.

But we do not lack precedents: For in spite of the political prejudice which would fetter the human mind, schools of agriculture have been established in France, Switzerland, Prussia, Italy, and the Austrian states. We have an illustrious example to encourage and to guide us, in the establishment of M. de Fellenberg, at Hofwyl, in Switzerland. Impelled by a belief, that agriculture, in its study and in its practice, furnishes the best means of developing the usefulness of man, and of winning him to virtue, this gentleman undertook, with his private means, to establish and manage a school, which should improve "the art of cultivation, and the character of the cultivator" He encountered many difficulties in the undertaking, among which the prejudice of his fellow citizens was not the least formidable. But his perseverance has triumphed over them all. The school prospers. Several professors have been employed to aid him in his labours, and the number of his pupils is now only limited by the extent of his accommodations.

It may not be amiss to detail some of the prominent features of this and other agricultural schools in Europe: For although their orgrnization may not be exactly suited to our habits and political condition, they afford tolerable data for our own practice.

The establishment of M de Fellenberg, may be arranged under the following heads:

1. A pattern farm, designed to serve as a model. This exhibits "the principle and the application of all that has been found advantageous, and, at the same time, the most accurate practical details."

2. An experimental farm, designed to advance the progress of the science and the art; to assist the labors of the pattern farm, and to give exercise and instruction to the pupils.

3. A manufactory of implements of husbandry, of the most approved models, for the use of the school, and for sale, under the care of a skilful mechanician.

4. A school of industry for the poor. The boys belonging to this school, taken from the most indigent classes, are gratuitously instructed by a competent master, who is constantly with them. They are kept by themselves—receive a good education, and are taught agriculture, and some mechanic art, in shops attached to the establishment where most of the useful trades are carried on.

5. A boarding school for the children of affluence, who are sent thither from the German states, as well as from the neighbouring cantons. The very complete education which these receive, under the eye, and in the house of the principal, terminates with a course in the agricultural institute; at the same time, it forms pupils who carry to their abodes the theoretical and practical knowledge which they have acquired.

6. An institute of agriculture, theoretical and practical.

This school, which was established about sixteen years ago, has attracted much attention on the continent, and has served as a model for others, particularly in Hungary and Bohemia. The emperor Alexander caused a detailed account of it to be presented to him, in 1814. He was so well pleased with its plan and management, that he complimented its founder with an order of knighthood. It is from the report alluded to, that the preceding abstract has been principally made.

The pupils of the Hofwyl school, are employed at high salaries, in various parts of Europe, to superintend and direct the labors of agriculture. Dr. Bright, in his recent travels in Hungary, saw one of them who had the superintendance of an extensive estate which he visited, the products and revenue of which had been quadrupled in a short time, by his judicious management. The same traveller enumerates eight schools, upon the Hofwyl plan, which had been established by the government, or by individuals, in the Austrian states. In these, the course of study generally lasts three years, in which time the pupils are instructed in natural philosophy, chemistry, natural history, and veterinary medicine; while, upon large experimental farms, they are taught agriculture, the management of fruit and forest trees; and the care of cattle, sheep, swine, and bees.

An agricultural school was among the means adopted by Leopold, to meliorate the condition of Tuscany; and that duchy is now among the best cultivated and most productive districts of Europe.

The emperor Napoleon, among other good deeds, organized and endowed the national farm at Altfort. "Here," says a gentleman who resided some years in France, "all the branches of science connected with Agriculture, are taught. Chemistry, botany, the anatomy of cattle, farrery, with the mechanics, and as much of geology as is known, and farm work and domestic economy, in every branch, and down to the smallest article, are there exhibited and explained. It was believed in 1810, that this academy had tended much to enlighten the people of France, on the general subject of husbandry—as well by the examples it gave of new and improved machinery, and the most successful objects and modes of culture—as by sending abroad into the provinces, many scientific men, who carried their knowledge with them, and were essentially the means of introducing new and better practices."

In 1808 or 1809, the king of Prussia established a school of agriculture at Moegelin. In twelve years, the value of the farm was increased from 2,000 to 12,000 rix dollars. Van Thaer is the director, and under him there are three professors—one for mathematics, chemistry, and geology; one for veterinary knowledge, and a third for botany, and the use of the different vegetable productions in the materia medica, as well as for entomology. Besides these, an experienced agriculturist is employed to instruct the pupils in the mode of applying science to the practical business of husbandry. There are attached to this institution, a botanic garden, arranged according to the Linnæan system, and a repository and manufactory of agricultural implements.

It is true, we have not yet any schools of agriculture in the United States. But it may be predicted, without the gift of prophecy, that we shall not be long without them. Their advantages are becoming so self-evident, and the public attention is so awakened on the subject, as in all probability to leave to *this* legislature only, the privilege of deciding, whether New-York shall take the lead of her sisters in this, as she has taken the lead of them in most of the other great improvements which distinguish our day and country. The subject has been twice before the legislature of Pennsylvania—a favourable report has been made in the popular branch upon it, and the project postponed, but not abandoned. But Virginia has begun to act in earnest. The society of Albemarle county, with the late President Madison at its head, has appropriated $1,000 of its funds towards endowing a professorship of agriculture in the university of that state. They have also addressed a circular to the other agricultural societies in the state, inviting their cooperation; and have called upon the citizens of the commonwealth at large, to aid by private subscriptions, restricting each to one dollar.—Their plan very properly embraces a course of instruction in the practice as well as the theory of husbandry. "To the due success of agriculture," says Mr. Madison, "theory and practice are both requisite. They always reflect light on each other. If the former, without the test of the latter, is a vain science; the latter, without the enlightened precepts of the former, is generally enslaved to ancient modes, however erroneous, or at best but too tardy and partial in adopting salutary changes. In no instance, perhaps," he adds, "is habit more unyielding, or irrational practices more prevalent, than among those who cultivate the earth. And this is the more to be lamented, as agriculture is still so far below the attainments to which it may fairly aspire."

Your committee beg leave to suggest some of the many advantages which are likely to grow out of the establishment of an agricultural school in this state. And,

First, to its agriculture. This school will collect the best systems, and most recent improvements in husbandry, from Europe and America; analyze them,—adapt them to our climate, our soils, our productions, and our wants;—demonstrate their utility in practice, and disseminate a knowledge of them into every part of the state. The Hofwyl farm will serve to illustrate the extent of these advantages. Mr. Brougham visited this in 1816, and inquired minutely into its details. Two years afterwards, he spoke in high commendation of it in a report which he made to the British parliament, upon the subject of education. The whole establishment, he says, comprises but 214 acres; and the average annual profit of the pattern farm alone, for a period of four years, he found to be 836 pounds sterling, or about $4,000, exclusive of the cattle concern, which was kept separate. We are furnished, in Rees' Cyclopedia, with numerous statements, demonstrating the superiority of the new over the old system of husbandry; two or three of which shall be noticed in abstract. The first comparison is made on a mixed, or grazing, breeding and tillage farm, of 314 acres, in York. Under the old system, the net profits amounted to £318 10*s.* and under the new system, the same lands yielded a net profit of £596, making a difference of £278; or nearly 100 per cent. in favor of the new system of husbandry. The second case is that of a tillage farm, of 139 acres, in Lincolnshire. Under the old system, the profits were £130,—under the new £452—Difference in favor of the latter—£322, or 250 per cent. A third statement exhibits the profits of an acre of land, being the medium of several hundred acres, in Yorkshire, for six years, Under the old system, the profit was £1. 9*s.* 3*d.*—under the new, £17. 6*s.* 9*d*, an increased gain of more than 1100 per cent. in favor of the latter. The medium profit of an acre in tillage, in England, is stated at from 27 to 36 dollars per annum.

We need not resort to Europe for evidence of the disparity which exists between the old and new systems of husbandry. Every day's observation affords proof in our own practice. Why does the county of Dutchess outstrip her neighbors in fertility and wealth? Not because nature has been more bountiful to her soil; but because her farmers are better instructed. Why, in passing through our country, in any direction, do we see one farm twice or thrice as productive as another, with equal natural advantages? This contrast cannot be wholly owing to indigence, or to indolence, in the unsuccessful cultivator. It proceeds rather from the want of method—of knowledge. Knowlege is science—and science is only precepts and principles grounded on demonstration.

It has been said, that agriculture is a *trade*, an *art*, or a *science*. That as a trade, it requires only the exercise of bodily power. That as an art, it employs the understanding and the judgment; and that as a science, it comprehends a knowledge of natural history, of chemistry, &c. so far as these are subservient to the improvement of husbandry. We have many who follow the trade, less who practise the art, and but few who understand much of the science.

The introduction and multiplication of improved machinery, would be an important benefit growing out of this establishment. Mr. Brown, an English writer on husbandry, and his estimate has been adopted by Sinclair, calculates, that a profit of 1,800,000 pounds sterling, per annum, would result to Great Britain, if one half of the grain raised in the kingdom, should be threshed with the improved threshing mills. Mr. Burgess, in a late address to the Rhode Island society for the promotion of industry, enters into a calculation to show, that the general use of Wood's cast iron plough, would effect an annual saving, in that small state, of $8,000. The faculty of this school would be competent to investigate the principles, and to test the usefulness of the implements now in use, and of those which genius and skill may hereafter bring forth. Their opinions would inspire confidence in those found to be useful, and prevent imposition and loss by those found to be useless. Genius would thus be encouraged, and imposture put down. An authority to grant honorary rewards, for inventions proved to be valuable, could not fail to facilitate improvement. A manufactory would afford models of the best machinery, to those who might want to buy, and serve as a school of instruction to the pupils, in the application of mechanics.

An experimental farm, of the operations of which, accurate details should be kept, would furnish good tests of the value of grains, grasses, plants and animals, which may be introduced from abroad, or but partially known among us—would instruct us in their culture and management—and do much towards establishing general and salutary principles in the business of husbandry. It is not enough to know what experiments prove successful. We need to be advised of those which prove unsuccessful, in order that we may avoid the errors which their results indicate. Errors in husbandry are not published by the individuals who commit them, because they would imply a want of knowledge. "The art of agriculture can never be brought to its highest degree of perfection, or established on rational and unerring principles, unless by means of experiments, accurately tried and properly persevered in. It is full time, therefore, by the establishment of an experimental farm, under the sanction and at the expense of government, to bring the art to as great perfection as possible, by ascertaining the principles on which it ought to be conducted." The public would be made acquainted with the important facts developed by the operations of this farm, through the medium of periodical publications; and the students would disseminate a knowledge of them orally, and by their practice.

Horticulture would be improved, and its benefits extended, by this school. A knowledge of grafting, inoculating, transplanting and pruning fruit trees,—of the best varieties of fruit, and of culinary vegetables and their management, are useful qalifications to almost every man in the community, and administer to his profit as well as to his comfort.

Secondly. To commerce and manufactures, the benefits of this school will be in the ratio of the increased products and profits of agriculture. Commerce and manufactures prosper or languish as the harvest is abundant or scanty. Take the husbandman from the soil, and they perish.—Multiply his products and they thrive.

Thirdly. A school of agriculture will improve the morals of society. Industry is the best preventive of vice, and the surest promoter of virtue. This school will promote industry, not only on account of the pecuniary rewards which it will hold out, but from the desire of honourable distinction which it will cherish. The students will carry with them to their dispersed homes, constitutions hardened by the salutary influence of field labor,—minds enriched and invigorated by useful knowledge, and familiar with the best systems of husbandry;—habits of reflection, of industry and sobriety;—and a laudable ambition to excell, in a business, in which private gain is always public good. The more conspicuous the example, whether of industry or of indolence,—of virtue or of vice, the more extensive its influence.—The greatest stimulus to study and application, which can be infused into the youthful bosom, is the hope of excelling. Here will be ample scope for its indulgence. If endowed with an ordinary capacity, this school will confer upon the pupil advantages which cannot fail to render him conspicuous in life. His example will operate as a stimulus to industry and improvement to the circle around him; and the sphere of its influence will be constantly enlarging. By raising the character of agriculture, and classing it among the liberal and learned pursuits of life, we shall attract many to its shrine, and to habits of usefulness, who would otherwise eke out lives of indolence and vice. The professions are overstocked. Many who have been educated in them, are resorting to agriculture, illy qualified as they are, to make a subsistence. Others would follow their example, did not lethargy, false pride, or the want of knowledge or capital, interpose serious obstacles. How fortunate would it have been for these, had they been nurtured in a school of agriculture. Instead of being burdens to their friends, and leeches in society, they might have been public benefactors, and blessings to their families. That system of education has been bad, which has taught young men to expect a fortune, without instilling into them a single quality which can preserve or acquire one.

Fourthly. A school of agriculture will tend to augment the revenues of the state. The increased tolls upon the extensive lines of our canals, consequent upon the increase of the products of agriculture, will in a few years remunerate the treasury, in the opinion of your committee, for every expense incident to the establishment, Our situation is singularly propitious in this respect, and holds out a prospect of indemnity which no other state possesses. The new wants which it will create for the salt and plaster of the west, and for the lumber and iron of the north, will be extensive: and most of these will be subject to toll on their way to the consumer.

Fifthly.—It remains for your committee to consider the influence of a school of agriculture upon the political institutions of our country. It has been urged against the establishment of agricultural schools in Europe, "that it is dangerous to educate the labouring classes; that their knowledge may become the elements of discontent; that an educated people are more difficult to govern; and that the government which labours to enlighten the great body of the nation, prepares for itself the means of resistance." However forcible these arguments may seem where the divine right of kings is acknowledged, and where blood peers it over virtue and intellect, *our* policy and *our* duty demand the observance of maxims directly the reverse. Our agricultural population constitute, by their numbers and their habits, our efficient strength in war. They also, either directly or indirectly, bear most of the public burthens. And they are, emphatically, the guardians of our civil and religious freedom. Hence our danger arises, not from an *excess*, but from a *want* of knowledge in the great body of the people. Our yeomanry are not deficient in natural talents; but education has generally denied to them that polish of language, and that fluency of speech, which often, in their professional brethren, is a potent recommendation to the posts of profit and honour. Perhaps the general good would be best subserved, and jealousy averted, if each class in the community were to participate in the duties of office, as nearly as possible in the relative proportion of their numbers. The school which your committee propose, would soon furnish a body of men, whose feelings, habits and interests would be purely agricultural—whose education would fit them to perform the highest public trusts,—and whose influence in our councils, and among the people at large, would afford the best guarantee of a popular—of an honest administration of public affairs.

The plan and regulations of this school will properly fall within the province of the commissioners, to be named in the bill accompanying this report, and these it will require time and deliberation to mature. It may not be improper, however, to state generally, that the course of studies contemplated, will embrace every branch of science which is applicable or useful to agriculture, and the practice of other countries and other states,—and that the labours of the pupils will extend to every department of practical husbandry, including gardening and the management of cattle. It will be desirable to fix the tuition so low, as to place the benefits of the school within the reach of youth of moderate resources.

Having thus given an exposition of the benefits which are likely to result to the state, from the establishment of an agricultural school, and of the course of instruction contemplated, it remains for your committee to suggest the ways and means by which this school is to be established and supported. A commendable economy ought always to govern in the appropriation of public money; but in public, as in private concerns, a reference to future indemnity, and ultimate gain, ought not to be lost sight of. Your committee, for the reasons already detailed, are induced to consider the appropriations requisite to this object, rather as a *loan*, than as a *donation*—and as a loan too for which the state will receive usurious interest. They possess no data to determine what funds will be requisite to support this seminary. The Hofwyl school maintains itself, and is a source of profit to its beneficent proprietor. It may be proper to remark, that nothing of ostentation or extravagance is contemplated. The buildings should display solidity, simplicity, neatness and taste; and, in relation to their arrangement, exhibit the model of a well organized farm establishment. The land is already proffered to the state. The Hon. Stephen Van Rensselear, as an evidence of the high expectations of public usefulness which he entertains from the proposed establishment, and in accordance with a spirit of liberality which has characterized his life, has offered a gratuitous deed of the lands required for the use of the institution. This will be of sufficient extent for a model and an experimental farm, and for the other purposes of the institution, and embrace a variety of soils and a command of water for experiments in irrigation. This school will supersede the present board of agriculture; and the existing appropriations to the latter, may be advantageously transferred to the former. As the object of appropriating $10,000 annually to county agricultural societies, is principally to encourage improvements in stock, and excite useful experiments in tillage, it may admit of a question, whether this appropriation also, with the exception of that part which is awarded as premiums for household manufactures, may not be more usefully applied to this school These items, with a moderate appropriation, would serve as the nucleus of a fund, which may hereafter be increased as the ability of the state shall admit, or the importance and interests of the institution shall demand.

There is another means of augmenting this fund, which your committee respectfully beg leave to suggest. There are several applications for bank and insurance charters already on our table, and notices have been published of others which are to come before us. It will not be denied that the interests of a respectable portion of our constituents may require the incorporation of at least a part of them. Although it is our duty, as legislators, to further the general interests of the state, yet we ought not to pass laws specially to facilitate private speculation. It is a fact of notoriety which has been blazoned in the public newspapers, that one individual did receive a bonus, or gift, of $60,000, to release his privilege in a banking company recently incorporated by the legislature of this state; and it is a fact equally well established, that another individual did receive about $20,000 for a similar release to the same institution. By a reference to Lang's shipping and commercial list, it will be seen, that the average price of the stocks of all the banks in the city of New York, is seven per cent. above par; and that the stock of one of the banks most recently incorporated, is seventeen per cent. above par; or, that $100 of the stock of this bank is worth $117 in cash. Experience has admonished us, that the original subscribers seldom continue to be the holders of bank stock; and that the applicants for charters have as often been influenced by cupidity, as by a desire to promote the public good. What has once happened, is very likely to happen again: but be this as it may—that new applicants can well afford to pay a bonus to the state, is evidenced by the fact, that the several banks which have paid bonuses for their charters, continue in the successful prosecution of their business, without any sensible diminution in the price of their stocks. The stock of the Bank of America, which paid a bonus to the state of $100,000, and a far greater amount to individuals, is quoted at about the par value. If, as is reasonable to be inferred, the stocks of new banks in our commercial capital, are to bear a premium of ten or fifteen per cent. the moment they are issued, is it unreasonable or improper to ask, that a portion of the profits, thus created by legislative indulgence, should accrue to the state? The example of the national and state legislatures, as well as the principles of equity, sanction the propriety of making this a condition of their charters.

Your committee would also beg leave to suggest, whether the avails of a tax upon bank stock might not be applied to this school without prejudice to the interests of the state.

It is not the object of your committee to compromit the state, by the bill which they are about to offer for consideration. It will become the duty of a succeeding legislature, when the plan and estimate of the expense shall be laid before them,—and when public opinion shall have been heard on its merits,—to decide whether the school shall be organized and endowed or not.

Your committee cannot close this report, without adverting, for a moment to the uniform and commendable liberality of the state, in endowing seminaries of learning, and in disseminating the blessings of education. It appears from a statement drawn up in 1820, that there then had been appropriated of the public monies, as follows:

To the literature fund, the revenue of which is annually distributed among academies,	$201,489	
As special grants to academies,	396,800	
As do for literary purposes,	28,715	
To Columbia college,	113,275	
To Union college,	418,500	
To Hamilton college,	106,800	
Total for colleges and academies,		$1,265,579
To the college of physicians and surgeons in New-York,	68,100	
To the college of physicians and surgeons western district,	15,000	
Total for medical science,		$83,100
To the New-York Historical Society,		12,000
To charity and free schools in cities,		25,000
To common schools,		1,232,900
Total,		$2,618,579

To which may be added the value of the escheated lands, and unappropriated literature and school lots, in the military tract.

These facts are derived from unofficial, though it was the wish of the committee, to have obtained them from official sources. They are therefore liable to error, and probably are incorrect in stating some of the items too low.

The above abstract is not introduced to call in question the wisdom of the legislatures who made these appropriations, but to direct public attention to an important fact which it discloses, viz. that of all these munificent grants, amounting in the aggregate to about three millions of dollars, not one dollar has gone in *direct* aid of agriculture, the great business of our state, the source of its wealth, and the foundation of its greatness. Of the one million two hundred and fifty-five thousand dollars, given to colleges and academies, the cultivators of the soil have derived but very little *indirect* benefit: For through these seminaries, lies the road to the professions,—not to the plough;—to mental, not to bodily labour. Eighty-three thousand one hundred dollars, have been appropriated exclusively to the medical department. Now that we have bestowed so much care and expense upon the *limbs*, your committee conceive it to be just and proper, that we should endeavour to infuse intelligence, vigour, and activity, into the *body*, that it may the better sustain and strengthen the members.

Your committee have prepared a bill in accordance with their views upon this subject, and have directed their chairman to ask for leave to present the same.

J. BUEL, *Chairman.*

IN ASSEMBLY, January 17, 1823.

An act relative to the establishment of an Agricultural School.

Whereas the propriety of the state rests on agriculture as its principal foundation ; and it is therefore the duty of the legislature to enact such laws as may, in the best manner, promote its improvements and cherish its interests: *And whereas* it is considered, that an institution wherein the theory and practice of agriculture, together with such of the arts and sciences as are essential to a perfect knowledge thereof, may be taught by competent instructors, will greatly facilitate the attainment of these highly beneficial ends—Therefore,

1. *Be it enacted by the People of the State of New-York, represented in the Senate and Assembly*, That —— —— be and they are hereby appointed commissioners to digest and prepare a plan for the establishment of an agricultural school, together with the ways and means for its support, and report the same to the legislature at its next session.

II. *And be it further enacted*, That the appropriations put at the disposal of the Board of Agriculture, by the act, entitled "An act to improve the Agriculture of this state," and the acts extending and amending the same, shall, from and after the —— day of —— for —— years, be at the disposal of the said institution, and be paid to its proper officer, out of the treasury of the state, in the manner prescribed, and for the purposes intended by this and the aforesaid acts.

HORSES—*the English blood-horse, is the best for every purpose ; ours should be improved by such as bear the test of the Turf ; the innocent sports of which should be regulated and patronized.*

Sir,

I have just read the letter from Captain Jones to you, and am decidedly of his opinion ; although a Spaniard may boast of his Andalusian horse, with a hog rump, long tail, and strait tail, almost glued to his buttocks.

But why should we not continue to go to the fountain head, for the horse, which is the best of all others for the sports of the field, for the race, for the harness or the plough? England, at immense expense, aided by great skill and long experience, has obtained every variety of this noble animal, and for more than a century, has applied the best of all possible tests, to ascertain the relative value of the various strains. The turf does not merely ascertain speed, but by the distance run, and high weights carried, the strength and stamina of the animal is fully tried

A king's plate horse would well perform his part in one of our stages, or in the gears of a Pittsburg wagon.

Without the private wealth to support the expense, without the leisure, patience or experience absolutely necessary, is it wise in us to neglect the fine English horse, almost perfected by the unbounded wealth of kings and nobles?

The Arab horse rarely more than fourteen and a half hands, and seldom that, is no doubt the source from which the greatest improvement has been made, but his descendants are now bred to sixteen and seventeen hands high, with great bone and muscle, perfect symmetry of form, and fine action.

Discard the blood horse of England, and select from all the world, and you would not in two hundred years, have as fine a strain of horses.—As far as my own experience goes, I agree with Lawrence, that the blood horse of England is the best for every purpose ; best for the chase, for the coach, gig, stage, plough, and wagon. I only stipulate, that they have size proportionate to their labour, and food and care to enable any horse to labour ; a good big horse under equal circumstances, will always beat a good little horse. I also stipulate, that we breed from thorough bred horses of size and form. The thorough bred horse is not only a capital performer himself, but his ancestors both male and female, have all been successful upon the turf, and their produce has been fully tried and approved ; while the mere full bred horse may trace a long line of ancestors, none of whom have ever been distinguished by their speed, power of continuance, or ability to carry high weights, and probably many of them absolutely worthless.

You can import from England, a horse of high form, of tried powers, and of generous approved ancestry, for less money than a worthless Andalusian would cost. That we have greatly deteriorated in our breed of horses, for the last twenty years, is indisputable, and it is equally certain that immense sums of money are annually sent out of the state, to procure harness horses ; twenty thousand dollars a year is a moderate estimate, yet a large deduction from the circulating medium of the state. To which of the counties of Maryland will you go to procure a pair of fine carriage horses, a fine gig or parade horse? With few exceptions, these are all imported from the east or west, the north or south, and this serious evil can only be remedied by encouraging the breed of blood horses.

With the same good care and expense which it would require to rear two three year old heifers or steers, one fourth of our horses at three years old, would command high prices for harness or saddle, to supply our towns, or to export ; the residue would be useful and valuable for our country roads, for farm horses, and in a corn field, during the heats of summer, the best of all. Provided, however, that they are not made altogether of legs and bones.

We must again patronize the turf, and avoid the evil which destroyed it. A farmer of moderate resources, will run his horse bred by himself, against the same kind of horses of his neighbours, but he will not, and cannot, race with any prospect of success, against great wealth, *having the power and liberty to pick the world* ; he knows that it is vain to contend against such odds, and prudently withdraws from the turf and contest. Let us, therefore, in the first instance, and until we have reared a stock of fine horses, patronize *Maryland bred* horses, and to create a fund, I recommend the following scheme:—

Compel the owner of every public stallion, to take out a licence for the season, paying for the same, at least the price which is demanded for the season of one mare, exempting from this tax every blood horse, who has won a purse of four miles and repeat, carrying one hundred and forty pounds for aged horses, and giving a premium to such winner, if he measures sixteen hands or upwards.

Let there be a three year old sweepstake, one mile and repeat, carrying one hundred pounds, at the county town of each county, in the month of October annually, free for all colts and fillies, foaled and raised in the county, and none others ; each paying twenty dollars entrance, and in case the sum of one hundred dollars is not made up for want of numbers, let the deficiency be made good out of the tax money ; and under a high penalty, do not allow any other racing in the county but for this one day.

Authorize a person to give a certificate to the winner, which certificate shall entitle the colt or filly to start for the four year old sweepstake, for the Western Shore, at Annapolis ; and for the Eastern Shore, at Easton, in the month of October annually, two miles and repeat, carrying one hundred and ten pounds. The purse to consist of entrance money, each fifty dollars, together with all the tax money remaining, after county sweepstakes, &c. have been satisfied, and at which race any four year old, of the respective shores, may start upon paying double entrance, and at all these sweepstakes, let it be the duty of the sheriff and constables of the county to attend, for the purpose of keeping good order, and to prevent all kind of gaming, the really ruinous branch of horse racing.

During the week that the four year old sweepstake is run for, allow a jocky club or subscription race, four miles and repeat, for all ages, one hundred and forty pounds the standard weight, and another purse three miles and repeat, the same standard, and forbid all other racing.—Should your funds permit, you may give a premium for the best pair of *Maryland bred* carriage horses, and for the best hackney.

And here, while speaking of hackneys, I will remind you of that valuable horse, the Chilian *natural* pacer, said to be sure footed, spirited, in good form, and remarkably handy.

If this horse has not been cultivated in England, it is because their climate does not require the same indulgence, which our hot summers and glowing sun, compel us to seek for. The celebrated Naraganset pacer, is no longer to be found, and although from the blood horse we often raise fine hacks, yet Hamilton's old Doree was the only imported horse within my knowledge, whose stock were generally fine saddle horses of all paces.

If my remarks meet your approbation, you are at liberty to make use of them. I am your obedient servant,
F.

John S. Skinner, Esq.
10th January, 1823.

AMERICAN GRAPE.

Dear Sir,

Among the variety of useful and interesting matter with which the American Farmer abounds, I observe several articles commending the culture of the Grape ; and latterly a communication from Col. Gibbs of this Island, advising attention to the culture of the grape of the United States ; of which there are several varieties, particularly from the southern states. Whether those grapes be indigenous, exotic or hybrids, is not a matter of great moment, provided they can be easily propagated among us by cuttings ; are hardy, healthy, and productive of good wine fruit.* Many of the gardens and some of the fields in this vicinity, contain valuable grape vines, and the soil of this part of Long Island, seems to be well adapted to grape culture, it being a fine sandy loam. But inattention, business, or something else, prevents the proprietors or occupants obtaining the knowledge of the proper mode of culture, and many of them believe the culture to be tedious and difficult; now, the vine, especially of our country, is a hardy, productive plant, and its culture very simple and easy. A little attention and practice will prove the truth of this assertion. Close trimming in the fall, (Nov.) of the well formed wood of the current year, to within three to five eyes of the wood of the preceding year, and leaving no more shoots upon one vine than can be trained with ease the ensuing year, will hardly ever fail to give vigorous fruit shoots in the spring. It is not necessary here to state the whole process of this simple culture; the reader may refer to the very intelligent and useful detail on this subject, contained in *No. 1. Vol. VI. page* 66, *of the Massachusetts Agricultural Repository and Journal*—which I presume you will republish; those directions correspond in all material points with the practice which I have pursued for the last four years, except *laying down* the vines. I am indebted to Father John Abercromby's Practical Gardener, for my instruction, by following which, I have, for four years, succeeded in rearing an abundance of garden grapes; and have not, as yet, been troubled with fly or worm, though there were "more signs of them" last fall that in any preceding year; the vine runs upon a trellis. Upon experience, I do not find it necessary to "*lay down*" and cover my vines, and I am now in the third year of open culture, *i. e.* exposed to all weather, except the roots, which I surround closely in December, with rotten manure, placing about five bushels to the root of each vine, which manure I spread in the spring; the chief strength or salts of this manure are probably carried to the roots, by the wet and rain of the winter, when the weather is mild.—From the exposure mentioned, I have not found any diminution in the quantity or quality of the grapes, which are of fine, rich flavour, and the vine is the greatest bearer that I have seen in any part of our country. The bunches of fruit are compact, weigh from ¾ to 1 lb.; the grapes are of a deep purple colour, oval shape, and have an unusually thin skin, for an American grape. I estimate the number of bunches on a double trellis of 30 yards length, at about one thousand per annum, *i. e.* that number were permitted to ripen; nearly as many more were removed, in trimming and thinning. This grape was brought from Smithville, North Carolina,† by Mr. G. Gibbs, of that state, and was reared by that gentlemen at this place, (Brooklyn,) with great care, under an impression that it was necessary to "lay it down and cover it" every winter. The same vine has been now three winters exposed, and without injury; the last winter, too, being unusually severe. Mr. Prince, of Flushing, has named this fruit the Vitis *Isabella*, in compliment to Mrs. Gibbs. I am informed that it has been botanically described under that name in some European publication, as a new species. I presume it to be a variety, and have some reason to think it a hybrid of the Burgundy and Fox Grape. The vine from which it was taken at Smithville, N. Carolina, came from the vicinity of Charleston, South Carolina, as is reported from Dorchester.‡ Some of the seeds of this grape were planted in my garden in 1818, and the young plants reared with care—last October the first fruits were taken, half a dozen small bunches, a fine grape, not differing materially from the parent. The juice of this grape is abundant and luscious, and though I have not yet made wine from it, I have no doubt that it would afford a high flavoured and rich wine. The plant has always proved to be a very vigorous grower; the fruit ripens from 5th Sept. to 25th October; I have kept ripe bunches hanging in the open air of a dry, cold room, until December.

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* *It has been said that all American Grapes have a tough and rigid pulp, and that where they are otherwise, it arises from their being either foreign plants or related to European stock. The origin of the Scuppernong and other Carolina Grapes, has occasioned some speculation, and the pursuit of the enquiry may be useful to the history of the plant. Some years since I read in Dawson's History of North Carolina, an account of the Scuppernong Grape; to the best of my remembrance, it was mentioned as indigenous to that state. Scuppernong is in Washington County, N. C. south side of Albemarle Sound. It has been suggested that this grape may have been originally planted by the French settlers, in the 17th century. About a year since, it was reported here, that in the state of Missouri there grew wild, a rich and juicy grape, which ripened in the forests, in the month of July—this report, if correct, deserves serious attention from those who wish to cultivate the Wine Grape. In reference to the Grape of Illinois, which adjoins the state of Missouri, it may not be amiss to mention that, in the*

Your respectful humble servant,

I. G. SWIFT.

Brooklyn, Long Island, 20*th Jan*. 1823.

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time of Louis XIV. the proprietor of the vineyard near Bordeaux, petitioned the King to prohibit the export of wine from Louisiana. The cause of this, was doubtless a belief that the Grape of Illinois was a good and abundant wine grape, and such as would injure the Bordeaux Wine Market.

† *I believe from the garden of Gen. B. Smith, at that place.*

‡ *Many of the settlers of Charleston, and its vicinity, it will be remembered, were Hugonots.*

PUBLISHED BY ORDER OF THE STATE.

A report of the Tobacco Inspected at and delivered from Dugan's Warehouse, during the quarter commencing the fifteenth day of November, eighteen one hundred and twenty-two, until the 22d January, 1823.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	57		54	hhds. 111
Number delivered.	324	16		340

R. WATERS.

TREASURY OFFICE, JAN. 27th, 1822.

True copy from the original report on file in this office.

B. HARWOOD, T. W. S. Md.

THE HAMPTON DAIRY—NEAR BALTIMORE.

We have been kindly permitted to take from the farm register the following account of sales of butter from Gen. Ridgley's dairy, at Hampton, in the year 1822.

January,	319½ lb.	sold at	market	$143 64¾
February,	401½	do.	do.	169 66½
March,	388½	do.	do.	171 31
April,	334	do.	do.	165 50
May,	344½	do.	do.	148 96½
June,	448½	do.	do.	127 18¾
July,	490	do.	do.	147 49¾
August,	457½	do.	do.	159 90
Sept.	272½	do.	do.	126 98¾
Oct.	266½	do.	do.	129 53
Nov.	282½	do.	do.	134 80
Dec.	291	do.	do.	138 84¼

4296½ lbs. butter sold: average 41 cts. per lb. $1763 83¼
860½ used in this year.
56½ given to Mrs. Onion.

5214½ lbs. made this year.
Sold ten veal calves for $55 00

CEMENT.

However valuable Mr. Skinner's paper continues to be, I find all his receipts are not infallible; particularly that on ashes and salt, for cracks in stoves, as I find after drying, it crumbles off, and weeping eyes are again renewed, but if you add a portion of Plaster of Paris with a little iron filings, it will produce a substantial cement, and the lustre of your eyes be preserved from the great annoyance of smoke. M. O.

Plinlimon.

THE FARMER.

BALTIMORE, FRIDAY, JANUARY 24, 1823.

☞ We publish with great pleasure the observations of a new subscriber and correspondent, on the AMERICAN GRAPE, and would fain cherish the hope of frequent contributions, from the pen of a gentleman so well known to his country, as one of scientific and general information. There are few subjects more interesting in their nature, or more important, than inquiries and experiments respecting our native grapes—their susceptibility of improvement by culture—their excellence as a table fruit, and their capacity to yield a generous wine.

To those who would turn their attention to these objects, we might venture to say that the volumes of the American Farmer contain already, more in explanation of the subject, than is to be found in the aggregate of all other American works, and yet there remains abundant room for enquiry and illustration, by new and interesting views of it, as will be seen in our subsequent numbers. In this as in many other cases of equal interest to the nation, it may be remarked that this journal has served as a kind of national speaking trumpet, whereby attentive observers in every state and climate have compared notes, and interchanged opinions.

ERRATA.

The following mistake of a letter escaped our proof reader—and as it materially alters the sense, we have been requested to correct it.—In No. 41, vol. 4, about the middle of the 327th page, for "washed" read *m*ashed.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $7 25—Howard st. Superfine, $6 87½—Wharf, do. 6 12½—Wheat, white, $1 35 to 1 40—Red do., $1 30 to 1 32—Rye. 71 to 75 cents—Corn, 58 to 60 cts.—Oats, 35 to 37½ cents—Beef, live cattle, $5 to $5 50 per cwt.—Beef, 8 cents per lb.—Bacon, round, 10 to 11 cts.—Pork $4 50 to 5 50 per c lb. 6 to 8 cts. per lb.—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $8—Orchard Grass do. $3 50—Herds' Grass do. $3—Timothy do. $5—Millet, $2—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons, 32 to 34 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, none in market—Herrings, No. 1, $3 62½ per bbl.—No. 2, $3 37½—Fine salt 80 to 90 cts. per bush.—Coarse, do. 75—Butter, 20 to 25 per lb.—Eggs, 25 cts. per doz.—Turkeys, 75 cts. to $1—Geese, 37½ to 50 cts. Chickens, $1 50 per doz.—Straw, $12 50 to 13 per ton—Hay, $17.

MARYLAND TOBACCO—No alteration in prices.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor by JOSEPH ROBINSON, at the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for Printing or Binding, with proper directions promptly attended to, addressed to J. Robinson, Baltimore.

THE AMERICAN GARDENER.

CHAPTER IV.

Vegetables and Herbs.

210. CELERY.—The qualities of this plant are universally known. There are three or four sorts. The *white*, the *red*, the *hollow*, and the *solid*. The *hollow white* is the best; but the propagation and cultivation of all are the same. The whole of that part of the year, during which the frost is out of the ground, is not a bit too long for the getting of *fine* Celery. The seed, sown in the cold ground, in April, will lie *six weeks before it come up*. A wheel-barrow full of hot dung, put in a hole in the ground against a wall, or any fence, facing the south, and covered with rich and fine mould, will bring the seed up in *two weeks*. If you have a hot-bed frame, or a hand-light, the thing is easy. A large flower-pot will bring up out of ground, plants enough for any family. As soon as the plants are *three inches high*, and it scarcely matters how thick they stand, make a nice little bed in open free air; make the ground rich and the earth very *fine*.—Here prick out the plants at 4 inches apart; and, of course, 9 in a square foot. They are so very small, that this must be carefully done; and they should be gently watered once, and shaded 2 days. A bed 10 feet long, and 4 wide will contain 360 plants; and, if they be well *cultivated*, they are more than any common-sized family can want from November till May.—In this bed the plants stand till the middle of July, or thereabouts, when they are to go out into trenches. Make the trenches a foot deep and a foot wide, and put them not less than *five feet* asunder. The ground that you make the trenches in should not be fresh dug; but be in a *solid state*, which very conveniently may be; for Celery comes on just as the Peas and early Cabbages and Cauliflowers have gone off. Lay the earth that you take out in the *middle* of the space between the trenches, so that it may not be washed into them by the heavy rains; for it will, in such case, cover the *hearts* of the plants, and will go very nearly to destroy them.—When you have made your trench, put along it some good rich compost manure, partly consisting of *wood ashes*. Not *dung*; or, at least, not dung fresh from the yard; for, if you use that, the celery will be *rank* and *pipy*, and will not keep nearly so long or so well.—Dig this manure in, and break all the earth very fine as you go.—Then take up your plants, and trim off the long roots. You will find, that every plant has offsets to it, coming up by the side of the main stem. Pull all these off, and leave only the single stem. Cut the leaves off so as to leave the whole plant about six inches long.—Plant them, six inches apart, and fix them, in the manner so minutely dwelt on under the article, *Cabbage*, keeping, as you are at work, your feet close to the outside edges of the trench. Do not *water* the plants; and, if you plant in *fresh-dug* ground, and fix your plants well, none of the troublesome and cumbrous business of *shading* is at all necessary; for the plant is naturally hardy, and, if it has heat to wither it above, it has also that heat beneath to cause its roots to strike out almost instantly. When the plants begin to grow, which they quickly will do, *hoe* on each side and between them with a small hoe. As they grow up, *earth their stems*; that is, put the earth up to them, but not too *much at a time*; and let the earth that you put up be finely *broken*, and not at all *cloddy*. While you do this, keep the stalks of the outside leaves close up to prevent the earth from getting between the stems of the outside leaves and the inner ones; for, if it gets there it checks the plant and makes the celery bad.—When you begin the *earthing* take first the *edges of the trenches*; and do not go into the middle of the intervals for the earth that you took out of the trenches. Keep working backwards, time after time, that is earthing after earthing, till you come to the earth that you dug out of the trenches; and, by this time the earth against the plants will be above the level of the land. Then you take the earth out of the middle, till, at last the earth against the plants forms a *ridge* and the middle of each interval a sort of gutter. Earth up *very often*, and not put much at a time. Every week a little earth to be put up.—Thus, in October, you will have four ridges of Celery across one of the Plats, each containing 168 plants. I shall suppose one of these ridges to be wanted for use before the frost *sets in* for good. Leave another ridge to be *lock-up* by the frost, a much safer guardian than your cellar or barn-door. But, you must cover this ridge over in such a way that the *wet* will not get down into the hearts of the celery. Two boards, a foot wide each, their edges on one side laid upon the earth of the ridge, formed into a *roof* over the point of the ridge, the upper edge of one board going an inch over the upper edge of the other, and the boards fastened well with pegs, will do the business completely; for, it is not the frost, but the occasional *thaws* that you have to fear, and the *wet* and *rot* that they produce.—For the celery that is to serve from the setting in to the breaking up of the frost, you must have a bed of sand, or light earth, in a warm part of a barn, or in a cellar; and there you must lay it in, row after row, not covering the points of the leaves.—To have *seed*, take one plant, in spring, out of the ridge left in the garden. Plant it in an open place, and you will have seed enough to serve a whole township. For *soup* the seed *bruised* is as good as the plant itself.—For the number of years that the seed will keep good, see Paragraph 150.

211. CHERVIL is an annual plant. Its leaves a good deal like those of double parsley. They are used in salads. A small patch, sown in rows, like parsley, is enough.

212. CIVES a little sort of onion, which is perennial. The greens only are used. A small quantity is sufficient for a garden. This plant may be propagated from seed, or from offsets.

213. CORIANDER is an annual plant that some persons use in soups and salads. It is sown in spring. The seed is also used as a medicine. A small patch, probably two square yards, will be enough.

214. CORN (Indian). To have some early, the *early sorts* must be got. A dozen or two of plants may be easily raised in pots, as directed for *Cucumbers*. See *Cucumbers*.

215. CORN-SALAD.—This is a little insignificant annual plant that some persons use in salads, though it can hardly be of any real use, where lettuce seed is to be had. It is a mere *weed*.

216. CRESS (or Pepper-Grass) is very good in salads along with lettuces, white mustard, or rape. It should be sown in little drills, *very thick* (as should the white mustard and the rape) and cut *before it comes into rough leaf*. A small quantity, in the salad-season, should be sown every six days. This salad, as well as the mustard and the rape, may be very conveniently raised in a corner of a hot bed, made for radishes or cabbage-plants.

217. CUCUMBER.—To give minute rules for the propagation and cultivation of this plant, in a country like this, would be waste of time.—However, if you wish to have them a *month earlier* than the natural ground will bring them, do this. Make a hole and put into it a little hot dung; let the hole be under a warm fence. Put 6 inches deep of fine rich earth on the dung.—Sow a parcel of seeds in this earth; and cover at night with a bit of carpet, or sail cloth, having first fixed some hoops over this little bed.—Before the plants show the *rough* leaf, plant two into a little flower pot, and fill as many pots in this way as you please.—Have a larger bed ready to put the pots into, and covered with earth so that the pots may be plunged in the earth up to their tops. Cover this bed like the last.—When the plants have got two rough leaves out, they will begin to make a *shoot* in the middle.—Pinch that short off.—Let them stand in this bed, till your cucumbers *sown in the natural ground come up*; then make some little holes in good rich land, and taking a pot at a time, turn out the *ball* and fix it in the hole. These plants will bear a *month sooner* than those sown in the natural ground; and a *square yard* will contain 36 pots, and will of course, furnish plants for 36 hills of cucumbers, which, if well managed, will keep on bearing till September.—Those who have *hot-bed frames*, or *hand-lights*, will do this matter very easily.—The cucumber plant is very tender and juicy; and, therefore, when the seedlings are put into the pots, they should be *watered*, and *shaded* for a day or two; when the balls are turned into the ground, they should be *watered*, and shaded with a bough for one day. That will be enough.—I have one observation to make upon the cultivation of cucumbers, melons of all sorts, and of all the pumpkin and squash tribe; and that is, that it is a great error to sow them *too thick*. One plant in a hill is enough; and I would put *two into a pot*, merely as a bar against accidents. One will bring more weight of fruit than two (if standing near each other,) two more than three, and so on, till you come to fifty in a square foot; and then you will have no fruit at all! Let any one make the experiment, and he will find this observation mathematically true.—When cucumbers are left eight or ten plants in a hill, they never shoot *strongly*. Their vines are poor and weak. The leaves become yellow: and if they bear, at all, it is poor tasteless fruit that they produce. Their bearing is over in a few weeks. Whereas, a single plant, in the same space will send its fine green vines all around it to a great distance, and, if no fruit be left to *ripen*, will keep bearing till the white frosts come in the fall.—The roots of a cucumber will go ten feet, in fine earth, in every direction. Judge, then, how ten plants, standing close to one another, must produce mutual starvation!—If you save a cucumber for seed, let it be the *first* fine fruit that appears on the plant. The plant will cease to bear much after this fruit becomes *yellowish*. I have said enough, under the head of *Saving Seeds* (Paragraphs, 139 to 146) to make you take care, that nothing of the melon, pumpkin or squash kind grow *near* a seed-bearing cucumber plant; and that all cucumbers of a different sort from that bearing the seed be kept at a great distance.—There are many sorts of cucumbers; the *Long Prickly*, the *Short Prickly*, the *Cluster*, and many others; but, the propagation and cultivation of all the sorts are the same.

218. DANDELION.—This is a well-known and most wicked garden *weed*, in this country as well as in England; and I am half afraid to speak of using it as food, lest I should encourage laziness. But, there may be people without gardens, and without the means of purchasing greens in the spring; and to them what I am about to say may be of use. The Dandelion is as early as the earliest of *grass*; and, it is one of the very *best of greens*, when it is young. It is a sort of wild *Endive*. The French, who call it (from the shape of its leave) *Dent de lion*, or *Lion's tooth*, use it, *bleached* as *salad*, and, if fine, large and well bleached, it is better than Endive, much

more tender, and of a better flavour. It is very common in rich pasture land in England; and cattle and sheep, particularly the former, prefer it, as far as my observation has gone, to every other plant in the pastures. It is full of *milk*-coloured juice, and fuller of it than either the Endive or the Lettuce. In the spring (June) 1817, when I came to Long Island, and when nothing in the shape of *greens* was to be had for love or money, *Dandelions* were our resource; and I have always since that time, looked at this *weed* with a more friendly eye.

219. DOCK.—I have frequently mentioned the leaves of this *weed* as being sold in the market at New York. This weed and the Dandelion are the gardener's two *vegetable devils.* Nothing but absolute *burning*, or a sun that will reduce them to *powder*, will kill their roots, any little bit of which will grow, and that, too, whether lying *on*, or *in*, the ground. Both bear seed in prodigious quantities.—The *Dock* (which is the wild *Rhubarb*) puts forth its leaves very quickly after the Dandelion; and hence it is that it is resorted to as *greens* in the spring. This is however, a *coarse* green compared with the Dandelion. However, it is better than no greens at all after five months of winter, which has left nothing green upon the face of the earth.—If a rod or two of ground, on the south side of a wood, were trenched and made *rich*, and planted with Docks, or Dandelions, the owner, even though he had no garden, would not be in want of early greens; and, it would be better to do this than to have to go upon the *hunt* after these vegetables, which, though weeds, are not, in every place, to be found in any considerable quantity; or, at least, not without spending a good deal of time in the pursuit.—The Dock-leaf is very wholesome, as is also that of the Dandelion.—They do not produce *gripings* as the greater part of the cabbage kinds are apt to do.—See *Rhubarb.*

220. ENDIVE.—This is a salad-plant, though like the Dandelion, it may be eaten as greens.—There are two sorts, the *curled* and the *plain*, just as there are of the Dandelion, which, as I observed before, is a sort of Endive.—The curled is *prettiest*, and is, therefore, generally preferred; but, the plain is the *best.*—Sow Endive in drills a foot apart; when the plants come up, thin them to a foot apart in the row, if they be not to be *removed* by transplantation; keep the ground clean, and hoe deep and frequently between the plants. When they get to a good size, they are to be *bleached* before they can be used as *salad:* for, while green, they are very bitter and not very crisp. In order to bleach them, you must take them *quite dry;* gather all the leaves carefully up with your hands; draw them into a conical form, and tie them round with *matting* or soft string, or little splinters of white oak.—When they have remained in this state for about a fortnight, they will be bleached and fit for use. The *time* of sowing may be as early as the weather will permit in the spring, and there may be another sowing for summer; but, it is for *winter* and spring use that Endive is most wanted; so that, the late sowings are of the most importance. Sow about the end of July, in fine rich ground. If you do not *transplant*, leave the plants at the distances before-mentioned; if you do, transplant at the same distances (a foot every way;) do it when the plants have ten leaves, and tip off both leaves and roots when you transplant. Fix the roots well as directed in the case of cabbage; and, as the plant is very juicy, and the weather hot, plant in the evening, or early in the morning, water a little, and lay some bows over to *shade* for two days, but take the bows off at night.—The best place for Endive would be the shady border. The plants will come in for use in October, November, and December. Some sown a little later must be preserved for winter use. Before the frost *sets in*, they must be tied up in a conical form, as before directed, and all *dead*, or *yellow*, leaves must be taken off. Then dig them up, with a ball of earth to each, and put them into light earth in a cellar, or some warm building. Put only the roots into the earth; do not suffer the plants to touch each other; and pour a little water round the roots after you have put them in the earth. If they be *perfectly dry* when tied up, they will keep well till spring.—To have them as early as possible in the spring, sow in the *third week of August*, and do not transplant. When the *hard frost is come*, cover the whole of the ground over with straw six inches deep, and throw (if at hand) some leaves of trees over the straw, and some sticks to keep the leaves from blowing away. But, the best covering of all, in this case is, boughs of *cedar*, or of *fir*, or *laurel;* though these boughs must be, for this purpose, cut up into small parts, so that they will lie close and compact and keep out the *light.* Some ever-green boughs, and some leaves of trees thrown over them, form, perhaps, the best covering in the world for plants of this description. But, observe; you must let the *frost come.* The ground must be right hard when you put the covering on; or else, the plants will rot. They must see the sun no more till spring. When the frost *breaks up*, take off the covering: hoe the ground as soon as dry, and proceed to perfect the plants in the manner before described.—One of these plants will produce *seed* enough to last you for five years.—There need not be many of these plants. *Lettuces* are their rivals, and are a great deal better.—I have mentioned *matting* in this article, as a thing to *tie* with. This matting is nothing more than the *threads* of those large things, in which foreign goods sometimes come packed up. These things are in England called *Mats*, and the threads of which they are composed, are by gardeners called *matting.* The gardeners use this for ties to Espalier trees; they tie on their *grafts* with it; they tie up their flowers with it; and, in short, it is the *string* of the gardeners. The Mats, thousands of bales of which are imported into England from Russia, are used to cover the hot-beds with, and for various other purposes.—But *matting* is to be had, and with very little trouble, without sending to Russia for it. Any one who has a *spare tree* may have plenty of matting. When I came to Long Island, I cut down a chesnut, of about a foot diameter, and that furnished me with a store of matting ties. The tree was cut in June; the outer bark taken off; and then the *inner*-bark came off in long *flakes*, some broad and some narrow, the whole length of the clear trunk, which was about 15 feet. I just hung this up to dry; and that was *matting*, to be cut into any length, and ready to use for any tie, where much strength was not required. The only precautions are: keep the matting in the dry, and when you use it *dip it in water* first for a few minutes, and take it out of the water as you use it. If you have put more into the water than you want for that time, take it out and hang it up in the dry again; and it will receive no injury.

221. FENNEL.—Fennel is a *perennial* plant; propagated from *seed*, or from offsets; and sown, or planted, either in spring or fall. The plants should stand about a foot asunder. It is a tall plant with *hairy* leaves. Its leaves are used in salads, are chopped up fine to put in melted butter eaten with fish, they are boiled with fish to give the fish a flavour, and, they are tied round *mackarel*, particularly when these are broiled. the French, who excel in the cooking of fish, always do this. The leaves, thus broiled, become crisp; and, they are then of a very fine flavour. In winter, the seed, bruised, give fish the same flavour as the leaves do in summer; and, to my taste, butter, seasoned with *Fennel*, is better than any of the fish sauces, bought at the shops.—It is a very hardy plant, Two yards square will contain enough for any family; and, once in the ground, it will stand there for an age, or ten ages, as far as I know.

222. GARLICK.—Almost all nations except the English, the Americans, and the French, make great and constant use of Garlick; and, even the French use it, frequently, to an extent that would drive us from the table.—It is propagated from seed, or from offsets: and is sown, or planted, either in spring or fall. For winter-use the roots are taken up and kept in the dry, as onions are.

223. GOURD.—I do not know any use that it is of. See Pumpkin.

224. HOP.—To range the Hop amongst the *Vegetables* may appear odd; but, it is a *garden plant* in America, and does give you, if you like to have it, a very good dish for the table. It is wanted to produce its fruit for the making of *yeast*, or *beer*, or both; and, to get good hops, there should be some cultivation. Any bit of a root will grow and become a plant. The young plants should be planted in the fall, three or four together in a clump, or hill, and the hills should be from seven to ten feet apart. The first year of planting, put four rods, or little poles, to each hill, and let two vines go up each pole, treading the rest of the vines down to creep about the ground. In a month after the vines begin to mount the poles, cut off all the creeping vines; and draw up a hill of earth against the poles all round, and cover all the crowns of the plants. In short, make a hill a foot high with a flattish top, and then fork up the ground between the hills and break it fine. When weeds begin to appear, *hoe* the ground clean; and at the end of another month draw some more earth up, and make the hill bigger and higher.—When the fall comes, cut off the vines that have gone up the pole, a foot from the ground; take down the poles; dig down the hills, and with a corn-hoe, open the ground all round the crowns of the plants; and before winter sets in, cut all close down to the very crowns, and then cover the crowns over with earth three or four inches thick. Through this earth the hop-shoots will start in the spring. You will want but eight of them to go up your four poles; and the rest, when three inches long, you may cut, and eat as *asparagus;* cook them in the same manner, and you will find them a very *delightful vegetable.*—This year you put poles 20 feet long to your hops. Proceed the same as before, only make the *hills larger;* and this year you will have plenty of hops to gather for use.—The next, and every succeeding year, you may put poles 40 or 50 feet long; but they must not be *too large at bottom.* Be sure to open the ground every fall, and to cut all off close down to the *crown of the plants*, which, when pared off with a sharp knife, will look like a piece of *cork*—In England, where there are more hops used than in all the rest of the world, it requires *four or five years* to bring a hop hill to perfection. Even then, a pole from 15 to 20 feet long is generally long enough; and the crop of *thirty hills* is, upon an average, not more than equal to that of *one hill* in the hop-plantations on the Susquehannah; notwithstanding that, on the Susquehannah, they merely plough the ground in spring; never open the crowns and pare them down, leave the loose creeping vines together with the weeds and grass to be eaten, in summer, by *sheep*, which also eat the leaves of the mounting vines as far as they, by putting their fore feet against the poles,

can reach up ; and yet, in England, the Hop-lands are called hop-*gardens*, and are cultivated and kept in a garden state.—But, hops are to be *preserved*. They are fit to gather, when you see, upon opening the leaves of the hop, a good deal of *yellow dust*, and when the seeds, which you will find at the sockets of the leaves of the hop, begin to be plump.—Gather them nicely, and let no leaves or stalks be amongst them ; and lay them out on a cloth to dry in the sun, taking care that no rain fall upon them, and that they be not out in the dew.—When *perfectly dry*, put them, very hardly and closely pressed, into a new bag, made of thick Russia linen, such as they make strong trowsers of. And, in this state, they will, if necessary, keep good and fit for use (if kept in a dry place) for *twenty years*, or, perhaps, three times twenty. I have used hops, for brewing, at *ten years old*, and found them just as *efficient* as new hops of the same original quality. However, *people say* that fresh hops have a more *lively flavour ;* and, as any *stick* will, in America, carry enough to supply a family with hops for the making of *yeast-cakes*, it must be shocking laziness not to put a few by every year.

(To be Continued.)

PAPERS DIRECTED TO BE PUBLISHED BY THE DELEGATION OF THE UNITED AGRICULTURAL SOCIETIES OF VIRGINIA, AT THEIR MEETING HELD IN THE TOWN OF FREDERICKSBURG, ON WEDNESDAY THE 7TH INST.

No. 6.

AN ADDRESS,

DELIVERED BEFORE THE AGRICULTURAL SOCIETY OF NOTTAWAY, BY DR. JAMES JONES, PRESIDENT OF THE SAME, 20TH NOV. 1822.

Gentlemen,

The pursuits of man have been as various and diversified as the circumstances under which he has existed upon the Globe ; yet under no circumstances whatever has he failed to rely on the productions of the earth, for his subsistence, for his clothing and for shelter. The animals which he pursues in the chace for the purposes of food, as well as the vegetables which he finds profusely scattered around him by the beneficent hand of his creator, are all the bountiful gifts of his Mother Earth. The busy scenes of commerce which mark the advanced stages of human society, consisted originally of an exchange of commodities either in the crude state in which the hand of industry obtained them from the earth, or fabricated by ingenuity into manufactured articles for use in the various departments of domestic economy. It is impossible to separate the business and interest of human society from the intimate connection with, and dependence upon, the employment and products of Agriculture, in some form and modification or other. It is the substratum upon which the whole superstructure rests. It is the vital principle which animates the whole mass and maintains all its motions. " It is one of those arts which from the earliest periods have been deservedly held in the highest estimation. One of the first injunctions upon our original progenitor, after his dismission from the garden of Eden, was that he should " till the ground." The experience of all the world, at all the periods of its History, has fully proven that the cultivation of this necessary art essentially contributes to the prosperity of mankind ; and that it ought to form a primary object in all moral and political regulations So sensible were many nations of its importance, that according to the history of the ancient Persians, their Kings, once in every month, divested themselves of regal pomp and partook of rural fare among the husbandmen. In China a day is still annually appointed when the Emperor goes in solemn procession to a field, where he shews his sense of the inestimable benefits of agriculture, by undertaking for a short time, the laborious occupation of directing the plough in person. Among the Romans the rural art was deemed so honourable a pursuit that the most distinguished Senators, at their leisure intervals, applied themselves to the cultivation of the soil. Numa Pompilius, one of their first Kings, was equally distinguished for his skill in agriculture as for his exemplary piety ; and such was the amiable simplicity of those times, that their greatest Warriors and Legislators were often called from the active labours of the field to the higher offices of the state. Cato the Censor, who had governed and subdued many warlike nations, did not consider it beneath him to write a Treatise on Agriculture ; and valuable works upon this subject have appeared at various periods of the Roman Empire. Modern Europe, and especially Great Britain and France, exhibit many illustrious characters who have thought it no degradation to devote all the energies of their personal exertion, as well as their princely fortunes, in promoting and improving agricultural and rural occupations generally. In the former country particularly, this spirit displays the greatest activity, not only among private individuals but in the Government itself, to increase the national resources for food and subsistence through the medium of an extended and improved cultivation of the soil. In the U. States of North America, advantages are possessed and inducements exist to stimulate to agricultural occupation unknown in any other country on the Globe. The Ecclesiastical incumbrances of Tythes and the feudal impositions of Service, which cramp and paralize every effort made towards the improvement of this science in too many other countries, are happily banished from us ; and the improvements of the farmer and planter accrue to themselves and their families, inheritable as a clear estate, or transferable at their option to any purchaser. Tyrants and despots who hold the property as well as the persons of their subjects, to be their own by a divine right, will encourage husbandry with a view not only to the requisite supplies of Cavalry and Provisions, but of able bodied Soldiers for their armies; whilst the friends of free government, not discarding from their system the ultimate necessity of defensive war, will not lose sight of that as a motive, but consider it secondary in point of importance and of propriety to the permanent benign influences of rural life, in forming the powers of man on the most perfect models, whether viewed in relation to his moral and intellectual or his physical character. To the advantages to be derived from the spirit and form of our political institutions, may be added the natural superiority of our soil, the peculiarly favorable condition of our climate, both enabling us to supply the demands of foreign nations, for the rich and valuable staples of our country, beside an abundant supply for our own use and consumption at home. For the improvement and melioration of this noble art, many devices and many plans have suggested themselves to the considerate and reflecting mind.—But the exertions of individual industry and ingenuity could avail but little towards such a general diffusion of knowledge as was desirable upon so important a subject. The formation, therefore, of Societies has occurred as the best mode of giving a salutary stimulus as well as a general currency and circulation to such improvements as have resulted from the ingenuity and invention, not only of individuals, but of societies and of Nations. As far back as the year 1756, France began to pay particular attention to this subject, in consequence of the unparalleled distress produced by the wars of that period, which had well nigh desolated the fairest portion of the civilized world. Prize questions were proposed by some of their academies and by societies instituted for the improvement of agriculture. The example was followed by most of the powers of the Continent as well as by Great Britain, from whence it was translated into this country.

Let us then recollect, gentlemen, that we form one link in that great chain of association which has existed for nearly a century, which has its origin in a Godlike Benevolence, characteristic of the great and the good in all ages and in all countries, whose aim is the melioration of the condition of the human family, by adding to their other comforts and enjoyments, that greatest of all earthly blessings, the possession of food in plenty.

In treating upon most subjects of the Arts or Sciences, it has become customary to reduce them to the two general heads of Theory and Practice. Upon most occasions this course is proper, because, in order to ascertain a correct system of rules in the practice of any given art, it should be an indispensable preliminary to obtain a thorough knowledge of the fundamental principles on which such art is based, with which all its procedures are intimately connected, and without a knowledge of which all the results of the practice are at best uncertain, often highly defective and sometimes injurious. In reviewing the history of the world, the mind is forcibly struck with the strange phenomenon that in almost all the varied pursuits of human ingenuity and industry, the natural and rational order of proceeding has been totally reversed, and systems of practical rules in the various arts, have generally preceded a system of fundamental principles, which should have been guides in the practice. If the discovery and application of mathematical principles to the various arts at an early period of Grecian history, forms an exception to this general statement, it is at the same time worthy of remark and of regret, that the knowledge of those principles, dry and abstruse in their nature, was exceedingly limited, being confined exclusively to the schools, which, at the period referred to, had lost much of their general influence in society, from that air of mystery and sophistry which enveloped all their teachings and doctrines. Agriculture has suffered from the same causes which have retarded the progress of knowledge generally. Besides that host of impositions and burdens imposed on it by governments, and the low grade it has too generally occupied in the scale of society, it has had to struggle against ignorance and prejudice, the most baneful enemies of human improvements.

If in the science of Medicine, a knowledge of the laws and principles of animated nature is deemed indispensable to a correct and safe practice of the healing art ; so in the nurture and cultivation of vegetables, a knowledge of the principles of their organization and the laws by which their growth is regulated, would seem to be equally indispensable, or at least a valuable auxiliary. I would by no means be understood as intending to sanction the opinion that there can be no good husbandry without this preliminary knowledge. There is no doubt that its practice may be carried on successfully, independently of an acquaintance with scientific principles. No person need be deterred, therefore, from attempting any improvements, because he is not conversant with the abstract parts of physical science ; and it is to be hoped that no member of this society will withhold a communication of his sentiments and experience upon any subject whatever, which has a direct and intimate connexion with practical agriculture, notwithstanding he may be unable to communicate such sentiments in the technical language of the science. Matters of fact derived from long experience and accurate observation, by those who have a capacity for minute discrimination, are far more essential to the progress of improvement than the most elaborate pre-conceived theories: yet there cannot be a doubt that a knowledge of Botany, Chemistry, Natural Philosophy, including some branches of Mechanics, would greatly contribute to the advancement as well as improvement of agriculture. The perfection of Art, is in proportion to its imitation of Nature.—Chemistry has already done much and promises yet greater benefits to the world, in detecting the arcana of nature, and in bringing to light some of her most secret operations. By chemical analysis the composition of soils and the proportion of their ingredients on which depends their varieties, may be accurately ascertained. By the same process we detect the qualities and ingredients which constitute *manures*, and in that way adapt them to the purposes of improving the soils. The science of Botany presents to our view the history of the nature and organization of vegetables: the soils in which they most delight, and the temperature of the atmosphere best suited to produce their highest perfection. None can doubt the importance and value of this kind of knowlege to those engaged in agricultural occupations. The modern improved construction of the plough, the harrow and other implements of husbandry, together with the construction of some entirely new ones, has done perhaps more than any other occurrences of modern times, not only in saving of labour, but in facilitating and simplifying all the operations of practical agriculture: And for these we are indebted, in a great degree, to a knowledge of the principles of mechanical science.

I have been led, gentlemen, into these remarks chiefly to pave the way for a suggestion, which I will now take the liberty of making from a thorough conviction of its great importance and its invaluable utility. I most seriously recommend to this society the formation of a library for the exclusive use of its own members, to be made up of such publications, as relate to every branch of rural economy: of these there are abundance, of modern production and of intrinsic excellence and worth; well calculated to instruct, to improve, and amply to repay the expense of procuring, as well as the trouble of reading.—The establishment of such institutions have been sanctioned, and their utility fairly tested, by the examples and practice of nations, communities, and societies, in all times and in all countries, since the invention of the art of printing. Like the circulating system of the blood, which carries life and vigour and health to every part of the animal, these great arteries of science diffuse knowledge and improvement and civilization throughout the remotest extremities of the social body.

These very imperfect and crude remarks, gentlemen, in which I have attempted to address your understandings, upon the importance of a knowledge of the principles and the necessity of a rational improvement of agriculture, belong to one branch only, of our business as a society. From the example which has been regularly given by the Delegation, to the united societies, at their sessions, we are led to consider the protection of the rights of agriculture in a political sense, as forming another branch of our business, when assembled; nor am I at all disposed to detract from the comparative importance of this branch of our proceedings, or to indulge any apprehensions of its tendency to convert our institution into a mere political faction, as some have apprehended. It has fallen to my lot (and I deem it a fortunate incident in my life) to present to the national Legislature, one of the first memorials which that body has ever received, in defence of the rights of agriculture, in opposition to the monopolizing claims and pretensions of the manufacturing interest of the United States. The firm and dignified tone of remonstrance, with the forcible appeal to the good sense and justice of congress, contained in those memorials, I doubt not had the effect in a great degree to arrest that body in one of the most baneful systems of policy that ever disgraced any nation, professing to be governed by impartial laws, based upon the principle of equal rights; a system of policy which would lay prostrate at the feet of the most insignificant and inconsiderable interest in this nation, the whole of that course of administration by which we have grown to renown, to wealth, to prosperity, and a dignified rank among the nations of the earth: a policy which would drive this nation from a course of measures pointed out to her by the unerring hand of Nature, which has stamped upon our geographical chart in indelible characters, "that agriculture and commerce should be the principal occupations of "our people." This foul spirit of monopoly, of local and partial legislation, so frequently and so fatally insinuating itself into our legislatures, whether in the form of protecting duties to encourage domestic manufactures, or of privileged chartered incorporations of whatever description, remains to be *exorcised* from its unhallowed hold upon our institutions by the all-pervading and all controlling influence of public opinion.—This influence embodied in a new form and derived from a source hitherto silent and overlooked, has already begun the work of reformation in this behalf. The agricultural interest throughout the United States, have at length discovered in what way it has happened that all other interests have mounted over their heads into the favour and patronage of Government, to *their* manifest injury and gross injustice. *They* too have indulged the feelings and obeyed the impulses of the "*Esprit de Corps.*" They have followed the example set them by the commercial and manufacturing interest, by embodying themselves, and as a distinct, separate interest have addressed the government in language manly, independent and disinterested. "We ask you" say they, "for no favor, no exclusive privilege, no charter "of incorporation. We call to your recollection "the instruments by which our independence "was achieved. It was the yeomanry of the "country, nurtured and cherished in the lap "of rural occcupation: From their bosoms the "republican spirit was transfused into our poli "tical institutions. Monopoly, privileged or "ders, chartered rights were the bane of that "government from which we seceded. We "threw it off on account of the mischiefs pro- "duced by that course of policy in the mother "country. *Our* government was made *by* the "whole *for* the whole, and no exclusive privi "lege can be conferred, but as a reward of ser- "vices rendered to the public. *Let us all alone.* "We demand only protection in our persons and "in our property—leave private, individual en- "terprize to its own guidance and direction, "equally untrammelled by the officious inter- "ference of government, in the form of restric "tion or of a pretended fostering care. Pursue "your legislative career, under the constitutional "prescriptions of a definite and specified power, "not by the unwarranted inferences of a loose "construction of general phrases. Give to all "an equal participation in the blessings of a free "government, by adopting a system of *general* "policy: not by *local*, partial legislation for a "particular interest, with the false, insidious pre- "tence that *all may* indirectly come in for a "share of the benefit. It is to this latter princi- "ple we trace that policy which in all ages has "led to the establishment of despotic govern- "ment, and from the practical operations of "which, particularly in the hierarchical institu- "tions of England, we were driven into success- "ful opposition to that power."

With sentiments like these, addressed to the understandings and justice of Congress, we will not doubt of success in reclaiming that body to a course of correct and legitimate and constitutional policy, at least so long as that body shall be composed of a majority of those who represent the labouring and productive interest of the country, in contradistinction from the speculative interest.

The great mischiefs attendant upon all the governments that have ever existed, have arisen from an officious meddling disposition in those who govern, to regulate *every* thing in society. This, however, should not be considered extraordinary in those governments, which were made exclusively for the benefit of the few privileged orders: because without such universal and constant superintendance and regulation they could not wield and manage the machinery to the purposes intended by its formation. Hence has originated in despotisms the bold assumption of a power, not only to regulate the high and important concerns of conscience in the form of establishments of religion and test acts; but also, the more insignificant and petty concerns of private domestic economy. But in the United States, where we have proceeded upon a belief that man is competent to self-government, it would be natural to suppose that political power should abstain from all interference with the affairs of society, except so far as to exercise a salutary parental power of protecting the weak against the strong, and restraining and coercing the vicious, the refractory and the violent, at the same time allowing all to pursue their own happiness in their own way, strictly regarding the rights of their neighbours. Whatever political measure shall detract either from the profits or the respetability of any avocation in society, must necessarily do it an injury, nor is it less true that whenever government shall lend its fostering aid to any particular branch of industry, it will thereby give it an impulse which may force it ahead of others, not so favoured. For many centuries preceding the revolution in France, the royal favour and patronage were exclusively bestowed upon the church and the army; and by amalgamating these two interests with the hereditary nobility of the country, it was not surprising that all honour as well as emolument attached exclusively to them. The consequence was that agriculture, commerce and manufactures being viewed and treated merely as subservient and auxiliary to the promotion and aggrandisement of these other leading interests, became disreputable and unprofitable, and were pursued exclusively by those only, who in the fashionable slang of the times were termed the *ignoble*, the *vulgar*, the *rabble*, &c. The history of other governments in Europe, which like France, have had a feudal origin, would furnish instances equally apposite to our purpose, which is to shew the all-pervading influence of political power in directing the destinies of man in this world. Nor is it important, as to results, whether such power is exercised under the title of a republic, or of an aristocracy, or of a monarchy. The effects will always be the same, if the causes are of the same nature. It matters not as to results whether the great labouring interest is ground to dust by the operation of a tythe to churchmen, under the specious and imposing pretext of supporting the hallowed institutions of Religion, or whether it be done by the operation of chartered privileges, in the more dangerous (because less intelligible and more insidious) form of protecting duties for the support of manufactures, and charters to banking institutions. He must indeed be a short-sighted politician, and unacquainted with the plainest and most obvious principles of political economy, who does not perceive that all such monopolies derive their support from the class of productive labour. Equivalents, it is true, are promised :—It is said that labour shall find in those chartered bodies, a surer and more convenient market for its productions; but with these false pretenses in their mouths, the politicians of Great Britain have gone on for more that a century in the practice of a system whose monstrous effects begin now to develope themselves in the bankruptcy and ruin of nearly a moiety of their labouring population.

Whilst then, gentlemen, as a society, we keep steadily in view the important subject of agricultural improvement, by communicating the results of experiments and of practice by a mutual interchange of opinions, let us equally guard and protect the rights of agriculture, by joining with our brethren throughout the United States, whenever the occasion shall call for it, in a mild but firm and manly tone of remonstrance against every branch of our government policy, which shall be found to operate injuriously to agriculture, and of course ought to be considered as partial, unjust and oppressive.

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EXTRACTS FROM THE ARCHIVES OF USEFUL KNOWLEDGE.

An account of the growth, and processes of Mealing, Malting, and Brewing of the Northern Naked Barley *—*By* R. FLOWER, ESQ.

Marden, near Hertford, April 1, 1810.

GENTLEMEN,

When I had the honour of being present at a meeting of your Society in February 1809, amongst the many subjects then discussed, were the qualities and merits of the Northern naked Barley.

As no accurate statement was brought before you of any experiment by which its value could be ascertained, I beg leave to recommend to your attention the following account of the growth and processes of Mealing, Malting, and Brewing of the Northern naked Barley.

On the 12th of May, 1809, I sowed five acres of it after a mixed crop of turnips and cabbages, which were fed off by sheep in the latter end of April and the first week in May. This crop being very abundant, kept the sheep longer on the ground, which was on this account in some degree better manured than any other land.

Although this barley was so late sown, it was ready to cut a week sooner than my English barley, and came to maturity a month sooner, which is doubtless an advantage to the husbandman, as the crop of barley on the latest-fed turnip land often suffers.

Of the produce I can only speak comparatively, as it was not large; a long drought in the summer burnt our light land crops, and this suffered with the rest. I had two quarters† of English barley per acre; of the naked four quarters, one bushel.‡ It came up well, and had a luxuriant appearance during the dry season.

I sent a bushel of each sort of barley to a neighbouring mill, requesting each might be ground and dressed into one sort of flour; the bran only being taken out; and an accurate account of the weight of each sent to me, which was as under:

	Pecks.	*lbs.*		*lbs.*
Foreign—Flour	2	8	or	36
Bran	1	3		17
Total				53 when returned from the mill.

	Pecks.	*lbs.*		*lbs.*
English—Flour	1	10	or	24
Bran	1	6		20
Total				44 when returned from the mill.

Each bushel of barley lost 4 lbs. in the process of its manufacture. It will be observed that the foreign barley made 12 lbs. more of flour, per bushel, than the English, which is within 2 lbs. of seven pecks per quarter, (of 8 bushels); and at the computed value of 2s. 6d. (55 cents) per peck, or $2 20 cts. per bushel, amounts to 17s. 6d. or $3 89 cts. worth of flour more per quarter (of 8 bushels) than was obtained from English barley of the last year's growth.

In the course of the winter I malted six quarters; it worked but indifferently on the floors, having many hard corn amongst it; but this I consider as the defect of almost all the barley of the year 1809. Its swell in the cistern was much greater than English barley; being, from six quarters, equal to our usual steeping of twenty quarters. I had also a large increase in the making, having nearly two bushels in six quarters, which is much more than it is usual to obtain from the best barley on our plan of making malt.

On brewing this malt, I had the satisfaction to find the wort tasted much richer than that brewed from my English malt.‡ My instrument (Richardson's Saccharometer) confirmed my observation, having extracted 12 lbs. more of saccharine matter, per quarter, than from the English malt.

The result of these different experiments appears to be in favour of the Northern naked Barley as follows:

	s.	*d.*	*$*	*cts.*
Nearly seven pecks of flour, per quarter, more than obtained from English barley, at 2s. 6d. or about 55 cents per peck,	17	6	3	89
Or in its malted state, 12 lbs. more of saccharine matter, per quarter, extracted than from English malt, at 1s.6d. or about 33 cents per lb.,	18	0	4	00

From this account it may be fairly presumed, that the northern naked Barley is worth from 17s. or $3 78 cts. to 18s. or $4, more, per quarter, than the English, for the purposes of mealing, malting, and brewing.

I remain your obedient servant,

RICHARD FLOWER.

REMARKS.

Mr. Vancover confirms the fact of naked barley ripening well, but adds that the grains must not be ground, but only cracked.§

A naked barley was introduced into Philadelphia a few years since, which yielded well, but upon the supposition that it would not malt, it has been but little cultivated of late. The foregoing accurate statement, however, not only fully proves the incorrectness of the opinion, but demonstrates the superiority of the naked barley for the purpose.—*Editor of the Archives, &c.*

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* *From the Letters and Papers of the Bath Society, vol. xii. p.*169, *Bath*, 1810.

† 16 *Bushels.*

‡ 33 *Bushels.*

‡ *Mr. Flower has since informed the secretary that the beer proves excellent.*

TO MAKE CIDER OIL.

This liquor is a very favourite drink with a large portion of our German citizens, and of an agreeable flavour, when diluted, to most persons. The following receipt has been communicated to the Editor, by a person well acquainted with the mode of compounding the liquor.

The cider must be well racked two or three times in clear weather. Four gallons of best apple-brandy are then to be added to each barrel of cider, if the cider be weak, but if it be strong, less will suffice. An infusion of Sassafras root, made by putting a piece of about the size of a finger, and chipped fine into a pint of water, improves the flavour. The barrel is then to be rolled.

In years when apples are abundant, cider even of a good quality brings only a small price; but by converting it into cider oil, it may be preserved until the following spring, and will then commonly sell well.

TO DRY PEACHES.

The following mode of drying peaches is adopted by Thomas Belanjee, of Egg-Harbour, New Jersey:

He has a small house with a stove in it, and drawers in the sides of the house, lathed at their bottoms. Each drawer will hold nearly half a bushel of peaches, which should be ripe, and not peeled, but cut in two and laid on the laths with their skins downwards so as to save the juice. On shoving the drawer in they are soon dried by the hot air of the stove and laid up.—Peaches thus dried are clear from fly-dirt, excellently flavoured, and command a high price in market. Pears thus dried eat like raisins. With a paring machine, which may be had for a dollar or two, apples or pears may be pared, and sufficient quantity dried, to keep a family in pies, and apple bread and milk, till apples come again. With a paring machine,* one person can pare for five or six cutters.

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* *An ingenious friend of ours, in Boston, promised to make us one of these machines, but we fear he has forgotten it.*—Ed. Am. Farmer.

* * *

ON MIXING COLOURS FOR PAINTING.

To make Gum Water. Dissolve gum Arabic in clear water to the consistence of sweet oil, and if too thick, reduce it by adding more water, and shaking it well together. Keep this in a phial for use. The different colours wanted, may be produced by the following mixtures, or substances:

A deep Scarlet. Mix red lead, vermillion, and carmine.

A light Scarlet. The best red lead only.

A light transparent Crimson. Carmine only.

A deep Crimson. Carmine and fine lake.

A deep Purple. Prussian blue and carmine.

A transparent Purple. Logwood steeped in water, and shaded with the above.

A full Rose Pink. Carmine and white flake.

An Orange colour. Red lead and gamboge.

A deep Brown. Burnt amber.

A light Brown. French berries and light ochre.

A deep Blue. Indigo and Prussian blue—shade with the former.

A light Blue. Verditer, or white flake and Prussian blue.

A transparent Blue. Prussian blue reduced to a wash.

A deep yellow. Dutch pink, or king's yellow.

A light or dark yellow. Gamboge alone, according to its thickness, will give every tint, from the lightest to the deepest.

A light Green. Sap green and verdigris.

A Pea Green. Verdigris or sap green mixed with flake white.

A lively transparent Green. Verdigris mixed with sap green.

A deep Green. Gamboge mixed with indigo.

A full Straw Colour. Flake white and king's yellow.

A transparent Black. Indian ink only.

A full Black. Ivory black only.

A white for shading. Sap green, Indian ink, and indigo very thin.

A common White. White flake only.

To make the colours work freely, mix them with a small quantity of fish gall. Should the paper shrink, wash the back of the print with alum water, or thin starch.

Mechanics' Gazette.

AGRICULTURAL SCHOOLS.

In our last number, we had the pleasure to present to our readers the very interesting Report, recently made by a committee, to the Legislature of New York, upon the important proposition to establish an Agricultural School in that State.

The merits of the plan are so clearly unfolded by the Committee, in their Report; that we felt no inclination to add a single reflection to it—much, and ardently as we wish, to see their views approved and successful.

We had received previous, but private intimations of this noble design, and had placed the following letter on file for publication: we now insert it, because it furnishes acceptable details, and gives us the opportunity to bear our humble testimony, to the useful and persevering labours of an early and zealous advocate of Agricultural, and Internal Improvements.

Editor Am. Farmer.

Albany, 26th December, 1822.

Dear Sir,

The multiplication of Agricultural Societies, and the progress of agricultural improvements in the United States, offer the highest gratifications to feelings of patriotism.

This excitement, which now pervades the whole country, has given rise at different periods to the most useful suggestions in several States.—A national Board of Agriculture was first suggested by the great Washington to Congress in 1796. And subsequently, pattern farms were recommended by such patriots as Judge Peters and Dr. Mease, of the Philadelphia Agricultural Society. The formation of a State Board of Agriculture was afterwards urged with great zeal and success in the State of New York, so that we may at least claim the honour of first instituting a Board of Agriculture in America: under the sanction of a law passed in 1819. But thus far, I fear the Board has been of little practical utility, and for reasons too delicate perhaps to be unfolded at the present day. Although attended with considerable expense, it has not fulfilled the public expectation—as it has not created any new excitement. On the contrary, several societies in this State have been abandoned; viz., Cayuga, Chenango, &c. Its efforts have only resulted in the publication of an annual volume, in precise accordance with the old practice of the Massachusetts and Pennsylvania Societies, under a system which never could produce any general effect. The institution must however be considered as in a train of experiment; and although slow and heavy in its present operations, it may and no doubt will, under a new organization, and in connexion with a pattern farm, be roused from its slumbers, proceed with more animation, and produce the important consequences, that were originally expected from it. It is with pleasure, Sir, I add, that the formation of a Pattern Farm in the vicinity of this city, is now agitated by influential men, with increased zeal This zeal has been prompted by the magnanimous offer of the Hon. Stephen Van Rensselaer, to *give* a farm of 200 acres, near this city, well adapted to the object. In pursuance of which on the 18th inst. Mr. Jesse Buel and myself, accompanied by Generals Van Rensselaer and Dunbar, left this city to examine and locate a suitable situation. None however has yet been found to unite so many requisites as the Cantonment at Green Bush, belonging to the United States, containing 250 acres of land, on which there are a great variety of buildings well adapted to the purpose. The soil is various, and the surface is diversified with hill and dale. There is a command of sufficient water for irrigating experiments—it binds on the turnpike road leading to Boston, lies high, is healthy, and affords a beautiful view of this City and the Hudson River. Several of the buildings may be made permanent, others would answer for the temporary accommodation of Agricultural students and for other purposes. This noble and magnanimous offer of Mr. Van Rensselaer, in connexion with his annual donation of *Five Hundred Dollars*, to the Albany County Agricultural Society, will entitle him to the gratitude and respect of the community, and consign his fair fame to posterity.—Should his example be followed by men of great wealth in other states, the practices of Agriculture, throughout our happy country, will soon be governed by rules of art, founded upon the truths of science, and give us a commanding stand among the nations of the world. As highly as I prize the important effects, which will result from our stupendous canals, I really believe that if this pattern farm should be well endowed, well organized, and well administered, by men of competent *talents* and *business* habits, it would in the range of 25 years, be found to produce far more extensive and more general benefit—considered in all its bearings; and especially, by the education of 400 young men yearly—qualifying them by all the rudiments of substantial and polite literature, to become honourable, useful and exemplary citizens——but ever keeping most prominently in view, the chief object of the establishment, which should be, to prepare them by study and labour to conduct experiments, that test the value of practices which prevail in a business, that is to be their future employment. In a word, to make them by education, labour and experience good practical and scientific farmers.—Thus in the process of a few years our whole system of agriculture will be advanced by knowledge and harmonize with the truths of science.

In subsequent communications the objects and progress of this important institution will be fully explained.

Respectfully,
ELKANAH WATSON.

John S. Skinner, Esq.

Editorial Correspondence.

VALUABLE CATTLE FOR SALE.

Rule by which to ascertain the weight of Live-Stock from measurement.

Fauquier County, Jan. 13, 1823.

Sir,—I lately read in your paper, No. 39 of vol. 4th, a letter on the relative merits of the Short Horn and Herefordshire Cattle, and was almost induced to believe that the cattle called Herefords, in that letter, were certainly a different race from those very valuable cattle imported in 1817, from England, by the Hon. H. Clay, of Kentucky, as the Herefordshire-reds; but my astonishment abated very much on reading in your next number, the reply of Mr. Smythies.—You mention in your preface to the publication of Mr. Smythies' letter, that "we have these identical breeds now in our country, in the hands of" certain gentlemen of different states, amongst them Mr. Clay, of Kentucky, is named, and that their offspring would soon be for sale. I purchased last summer in Kentucky some of the breed of Mr. Clay, which I am very partial to, and did not intend to offer them for sale, but since I read these publications in your paper, I m disposed to say that, for a liberal price, I will sell, as I have it in my power in a short time to replace them again. It is needless for me to say any thing relative to this breed, as any gentleman disposed to purchase, will make himself acquainted with their merits and view the cattle. I would only refer to the letter of Mr. Clay, published in your paper, No. 28 of the 4th volume, and the letter of Mr. Pickering, published in No. 23, of the third volume. Of this breed I have a very fine cow, five years old next summer, of a good size, a very handsome and delicate head and neck, pretty complete in all the points; of a beautiful blood red colour except, the face, under the breast, belly, &c. which are white. She is a good milker, and is now 4 months in calf, by her son Comet, a fine and noble young animal, two years old last July, of the same colour, &c. of his mother, and nearly five feet or fifteen hands high, well proportioned. Comet is a cross of the Herefordshire and Teeswater; he was got by Col. Crockett's celebrated Teeswater Bull, that came out of one of Capt. Smith's imported Heifers, and, it is said, he was got in England by a brother to the famous Bull Comet, that sold there for 1000 guineas. Mr. Clay, in a letter to me relative to these cattle, states, that he sold the above cow when a *yearling*, for $200 in specie. If application is made in a short time, I will take for Comet and his mother, five hundred dollars. Any communication to me may be directed to Middleburg Post Office, Loudoun county, Virginia.

I saw in the 24th No. of the volume of the American Farmer now publishing, a table for ascertaining the weight of animals by measurement, which lead me to make some calculations in order to discover the rule, by which the table was made out; and I find, that by squaring the girth and multiplying by the length, (as directed to be taken) the solid feet that the animal is supposed to contain are ascertained; then multiply that product by 3 lbs. and 356 thousandths, the weight allowed to each foot, and the product will be the weight of the animal—as for example.

Feet.	Inches.			
6.	4.	Girth.		
	6.	4		
2	1	4		
38	0			
40	1	4		square of the girth.
		5.	3	length.
10.	0.	4.	0	
200.	6.	8.		
210.	7.	0.	0 solid feet.	

3,356 lbs. in 1 foot.

$210\frac{7}{12}$

33560

6712

1957

lbs. 706,717 or 706¾ lbs.

Very respectfully, your obedient servant,
GEORGE LOVE.

J. S. Skinner, Esq.

TO PRESERVE BACON SOUND AND SWEET THROUGH THE SUMMER.

Dear Sir,—In the Farmer, volume 3, page 309, you published a communication from Mr. J. W. Lincoln, of Worcester, recommending, that hams, after being smoked should be packed away *in oats*. I followed his advice last year, and really feel so much indebted to him for the hint, that I must thus publickly thank him ; and for the benefit of my neighbours ask you to re-publish his letter. To give you the *best* proof of the beautiful state of preservation secured by this method, I send you a ham weighing 11¾ pounds, you will find it perfectly fresh, and full of essence—free from all sort of speck or blemish. Those practising this mode of preserving their bacon free from skippers or taint of any kind, should recollect, that the chest or cask, ought to be perfectly tight, and raised about six inches from the ground, and the oats packed in, quite tight. A ham of this size should be boiled 3½ hours at least.

☞ We can seldom undertake to speak from experience about recipes, but in this case we can *vouch* for its accuracy, from reliance both on the word and the judgment of both the writers. But it must not be expected that the oats will convert bad bacon into good ; all that is promised is that this will *preserve* it *in statu quo*.

EDITOR AMERICAN FARMER.

REMARKS ON THE WEAVIL.

If your friend Isaac Sharpless* will stack or barrack his grain a small distance from his barn, and a put few branches of *Jamestown weed*, on the ground or upon the first round of sheaffs, no weavil will approach it. If, however, it should be attacked on the threshing floor, or after putting it in the granary, cover it with slacked lime, and when wanted for use run it through the fan and blow out the lime.

I have, by this precaution, got rid of this pest, after many years experience.

* *See American Farmer*, *vol.* 4, *No.* 37.

SMUT ON MR. M—— P——'S CLOVER SEED.

I would recommend puting your clover seed on your threshing floor, and run your horses on it a few hours, then run it through your fan, with a coarse riddle. I am not in favour of sowing on snow, as a sudden thaw, after sowing, you lose great part of your seed running off in the gutters. In March, when the ground is frozen in the morning, sow as long as the ground will bear a man ; in the middle of the day the soil is soft and every seed beds where it falls—you will find your grass more uniform than any other mode of sowing.

Bucks County, 1*st Jun*. 1823.

MR. J. S. SKINNER.

MILLET.

Plough your ground early in April, and harrow it fine, let it lay until 1st June. If weeds appear, harrow again, then plough and wait for rain—as soon as a good rain comes harrow your ground directly very fine, and sow your seed and roll it twice. I have never failed raising as much as I could dry on the ground. If you sow when the ground is dry, one half of your seed perishes, as only such as are in damp soil vegetates. I sow 24 quarts or 3 pecks to an acre.

SIR,

I send the above without paying postage as I am informed you are Post Master. I have been a farmer thirty years, and find farming like the law, some new case occurs every year. My neighbour takes your paper, and requested me to answer those inquiries, which, if you think worth publishing, they are at all times at your service.

White Hall, Bucks County.

J. S. SKINNER, ESQ.

SWEET BUTTER.

The component parts of milk are oil, curd and whey. The oily parts constitute the cream, and the curd makes the cheese. The oily parts, being specifically lighter than the other parts of the substance, ascend to the surface in the form of cream.

In winter, four of five days, according to the common practice, are necessary to produce all the cream of a pan of milk. Such cream from this tedious process not unfrequently acquires a bitter taste, which is communicated to the butter. And the churning of butter from such cream is moreover an operation of four or five hours, and sometimes longer, unless hot water be poured into the cream, which invariably injures the butter by rendering it white and insipid.

To shorten the time and to diminish the labour of making butter, and at the same time to improve its quality, there has been recently established in the Dairy-House of Mr. Ro. Smith's Farm, called Orange, an apparatus upon the simplest principles imaginable. During the coldest weather in winter, in the course of less than twenty-four hours after the milk has been taken from the cows, sweet cream is produced, greater in quantity and richer in quality, than can be obtained in the ordinary management in five days. So rich, indeed, is the cream, that it is churned with as much facility as is the rich cream of the Alderney cows, in the summer season.—The operation of churning never exceeds twenty five minutes. The butter from such cream has never failed to be of a fine flavour and of a fine colour ; and in the nature of things it never can fail to be so, unless the dairy woman should be utterly ignorant of the art of making sweet butter. The process is not a new invention. According to the principles of the system pursued at Orange, is made the sweet butter which, in England, is the most admired. The part of the course of proceeding, not in common use is this:—The pans, with the milk just taken from the cows, remain until a thin skin of cream is produced. They are then placed in hot water, and in about 30 minutes thereafter, all the cream, contained in the milk, is formed on the surface The cream thus obtained is managed as other rich cream is in all well conducted dairies.

The principal merit of the apparatus* at Orange is the great facility of heating the water, the convenient fixture of the vessels containing the same, and the complete exclusion of every particle of the smoke of the fire.

The skimmed milk, consisting of curd and whey, without any of the buttery parts, has a peculiar sweetness, is extremely pleasant to the taste, and is deemed a very wholesome beverage.

With this apparatus butter can be made in summer as in winter.

Dairy farmers, disposed to adopt this system, may procure the apparatus from Mr. William Bear, Pratt street, Baltimore, and may, every Wednesday and Saturday, see the sweet and beautiful butter, made in this way, at Mr. Underwood's Stall, No. 42, West side of the Marsh Market.

A FRIEND TO FARMERS.

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* *A description of this would be thankfully received from the owner of that interesting establishment.*—ED. AM. FARMER.

PUBLISHED BY ORDER OF THE STATE.

A report of the Tobacco inspected at, and delivered from the Pig Point Inspection Warehouse, during the quarter commencing on the seventh day of October, eighteen hundred and twenty-two, and ending on the sixth day of January, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Reinspected.	Total.
Number inspected.	94			94
Number delivered.	212			212

GASSAWAY PINDELL, Insp.
Pig Point Warehouse.

True copy from the original report on file in this office.

B. HARWOOD, T. W. S. Md.

Anne Arundel County, 6*th Jan*. 1823.

A report of the Tobacco inspected at, and delivered from Herring Creek, Tracy Landing Warehouse, during the quarter commencing on sixth day of October, eighteen hundred and twenty-two, and ending sixth January, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Reinspected.	Total.
Number inspected.	98			hhds. 98
Number delivered.	130			130

JOHN H. TILLARD, Insp.

True copy from the original report on file in this office.

B. HARWOOD, T. W. S. Md.

ARBOR VITÆ.

George Town, 21*st Dec*. 1822.

DEAR SIR,

I send you by the stage, a small packet containing the seeds of the Chinese Arbor Vitæ.—You have them in Baltimore, I know, but not in such quantities, as I saved them last year. I can vouch for the quality of the seed, and you will have wherewith to give your country friends.*

Respectfully I remain,
your obedient servant,
JOHN THRELKELD.

* To any of whom, we will, with pleasure, give them.—*Ed. Am. Farmer.*

THE FARMER.

BALTIMORE, FRIDAY, FEBRUARY 7, 1823.

NAKED BARLEY.

Particular attention is due to a short article in this number, which gives "An account of the growth and progress of mealing, malting and brewing of NORTHERN NAKED BARLEY"—extracted from Dr. Mease's "Archives of useful Knowledge."

Our attention was first drawn to this grain, by a letter from Capt. Henry Hall, of Harford county, accompanied by specimens of the Barley, and of its meal and flour—the first he considered excellent horse-feed, and of the latter he had made good unleavened bread—which gave rise to a favourble estimate of its value, that will be more than confirmed by the very particular experiments detailed in the "Account" now published. Our own trials of the naked barley have, however, been but very limited—they have not disclosed any difference in the straw or in the measure of the grain; but as a bushel of this yields more pure meal than the common barley does, and as a greater quantity of saccharine matter can of course be obtained from it when malted, the Naked Barley is certainly entitled to the consideration of our farmers; and those who may wish to procure some for sowing the ensuing spring, will have an opportunity to do so this month, when Capt. Hall will send some bushels to Baltimore for sale.

That the nett profits of most objects upon which agricultural labour is bestowed, are now much less than formerly, is but too true; but is it equally certain that we cannot find new objects that might be more profitably raised? It must naturally happen in the fluctuations of supply and demand, that articles which have for a long time afforded a living profit, will take a turn, and for a series of years bring the cultivator of them in debt. And is not this the melancholy prospect of persons, who now persist in the culture of low priced tobacco? Would they not display better judgment by adapting their practices to the change of circumstances?—but how can they do this, if they never inquire, read and investigate?—or if they will not become familiar with the various products of the earth, as respects their nature, value and adaptation to various soils and climates?

It is a curious fact, that the cultivation of certain articles is restricted, as if by a prescription little less operative than legal enactments, to particular *districts* and *counties*. Thus we see that in our tobacco counties this plant is still raised for sale at $2 per hundred, by the owners of rich river bottoms and swamp lands, who never raised for the market a single hog, *bullock*, fine coach horse, or ton of hay, and who never having sown a grain of barley, appear to think that this crop has been given by Heaven as an exclusive boon to Gloucester county in Virginia.

◆

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $7 25—Howard st. Superfine, $6 87½—Wharf, do. 6 12½—Wheat, white, $1 35 to 1 40—Red do., $1 30 to 1 32—Rye, 71 to 75 cents—Corn, 58 to 60 cts.—Oats, 35 to 37½ cents—Beef, live cattle, $5 to $5 50 per cwt.—Beef, 8 cents per lb.—Bacon, round, 10 to 11 cts.—Pork $4 50 to 5 50 per c lb. 6 to 8 cts. per lb.—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $8—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $5—Millet, $2—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons, 32 to 34 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, none in market—Herrings, No. 1, $3 62½ per bbl.—No. 2, $3 37½—Fine salt 80 to 90 cts. per bush.—Coarse, do. 75—Butter, 20 to 25 per lb.—Eggs, 25 cts. per doz.—Turkeys, 75 cts. to $1—Geese, 37½ to 50 cts Chickens, $1 50 per doz.—Straw, $12 50 to 13 per ton—Hay, $17.

Maryland Tobacco—No alteration in prices.

HOPE—

The residence of the subscriber is offered for sale.

This farm is beautifully situated on St. Michæls river, near its mouth, and adjoining Colonel Edward Lloyd's Wye House estate. It possesses every advantage to be derived from the salt waters, in an abundance of fine fish, crabs, oysters, and wild fowl. The shores are firm and clean; it has a never failing stream of strong chalybeate water, and has ever been remarkably healthy. The land is fertile, with plentiful resources of manure; and containing about 700 acres, 240 of which are well covered with white oak and pine Timber. The buildings are substantial and commodious, and in the best state of repair. For terms of payment, which can be made accommodating, apply to

ROBT. LLD. TILGHMAN,
Near Easton, E. S. Md.

Cylinder Straw Cutters.

EASTMAN S PATENT.

These machines have now been fully tested and found to be efficient and durable. Upon farms near this city they have been used, full 14 months, to cut straw, hay, corn blades, tops, husks and stalks. One of them has been employed at the Dairy farm of Robert Smith, Esq. President of the Maryland Agricultural Society, to chaff forage of every sort, for one hundred head of cattle; and during the last three months eight hundred bushels of corn stalks have been cut with this machine per day.* This invention has been exhibited to the Maryland, and Pennsylvania Agricultural Societies, been tried by their committees, and obtained their premiums of merit, as the best straw cutter.—See No. 41, Vol. 3, and Nos 6 and 15, Vol. 4, of this journal.

It has at first view, been objected by many persons that these machines are too costly; but all acknowledge when they critically examine them, that, the price is as low, as they could be sold at—for they are of great power, and most substantially built. I would not intentionally make them otherwise, and I am well satisfied, by the past, that a liberal public will justly appreciate and suitably reward the manufacturer of good, substantial machines. Every part that experience has shown to be weak, has been so altered as to become perfectly strong; and long continued trials, seem now to prove that, in every part, they have been framed to endure the severest usage.—The great advantages that arise from chaffing long forage, make the possession of a substantial and powerful machine, a most desirable object to every enterprising Farmer; and I believe that every one who needs, and can afford to purchase one of my cylinder straw cutters, will never have occasion to regret the expenditure.

I make them of different sizes and consequently at various prices—the smallest at $45 to $50; the next size at $60, these are easily worked by a man—and the largest at $100, to be worked by a horse, this will cut from 4 to 5 tons per day, and the others from 70 to 100 bushels per hour.—They are all furnished with a revolving, leather feeding apron, except the lowest priced; and duplicate sets of knives are furnished when required at 5 to $6 per pair. When the machines are to be taken to places very distant from the manufactory, duplicate sets of knives should always be taken with them. Printed instructions for putting the machines up, and keeping them in order, are sent with the machines.——And the maker will ever, take pleasure in exhibiting, and working these machines, at his manufactory on Market-street, the sixth house west of Eutaw-street, for the satisfaction of any farmer, who may wish to purchase or to see them. All letters directed to him, if post paid, will be promptly attended to.

JONATHAN EASTMAN.

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* *This great quantity is reduced in bulk by steaming about two thirds.*

Valuable Property for sale.

I will offer at public sale, on Friday, the 14th of March next, at Bowling's Tavern, in Upper Marlborough, between 30 and 40 valuable SERVANTS, consisting of young men, women and children, among them some excellent house servants. They will be sold only to persons residing in this state or the District of Columbia, and who purchase with a bona fide intention of keeping them for their own use—from strangers I shall require satisfactory assurance, that they will be treated with kindness and humanity.

At the same time, I shall offer for sale about six hundred acres of Land, being part of the Estate on which I reside—175 acres of good Woodland, will form a part of the quantity sold, and the whole will make a very desirable farm or plantation.

The terms for both the real and personal property above mentioned, will be made known on on the day of sale, and in the mean time I shall be glad to shew the land to any one who may desire to purchase it.

RD. W. WEST.

*Woodyard, Prince Georges'
County, Md. Jan. 15th,* 1823.

Alderney Bull For Sale.

He is 2 years old, from an imported Cow of unusually good form, mouse colored, price $100; the owner having two bulls, wishes to sell one. Enquire of the Editor of the American Farmer.

Red Clover Seed, &c.

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THE AMERICAN GARDENER.

CHAPTER IV.

Vegetables and Herbs.

225. HORSE-RADISH.—Like every other plant, this bears *seed* ; but it is best propagated by cutting bits of roots into lengths of two inches and putting them, spring or fall, into the ground about a foot deep, with a setting stick. They will find their way up the first year ; and the second they will be fine large roots, if the ground be trenched deeply and made pretty good. Half a square perch of ground, planted at a foot apart every way, will, if kept clear of weeds, produce enough for a family that eats roast-beef every day of their lives. You must take care that the Horse-radish roots do not spread, and that bits of them be not flung about the ground ; for, when once in, no *tillage* will get them out. They must be, like the Dock and Dandelion roots, absolutely burnt by *fire*, or by a sun that will reduce them to a state of a dry stick ; or must be taken up and *carried away* ftom the spot. Though a very valuable and wholesome article of diet, it is a most *pernicious weed.*

226. HYSSOP is a sort of shrub, the flower-spikes of which are used, fresh or dried, for medicinal purposes. It is propagated from seed, or from offsets. A very little of it is enough for any garden.

227. JERUSALEM ARTICHOKE.—This plant bears at the root, like a potato, which to the great degradation of many of the human race, is every where well known. But, this Artichoke, which is also dug up and cooked like a potato, has, at any rate, the merit of giving no trouble either in the propagation or the cultivation. A handful of the bits of its fruit, or even of its roots, flung about a piece of ground of any sort, will keep bearing forever, in spite of grass and of weeds; the difficulty being, not to get it to grow, but to get the ground free from it, when once it has taken to growing. It is a very poor, insipid vegetable ; but, if you wish to have it, now and then, the best way is to keep it out of the garden ; and to dig up the corner of some *field*, and throw some *seed* or some roots into it.

228. LAVENDER. A beautiful little well-known shrub of uses equally well known. Hundreds of acres are cultivated in England for the flowers to be used in distillation. It may be propagated from seed ; but is easiest propagated from slips, taken off in the spring, and planted in good moist ground in the shade. When planted out it should be in rows three feet apart and two feet apart in the rows. If the flowers be to be preserved, the flower-stalks should be cut off before the blossoms begin to fade at all.

229. LEEK. There are two sorts: the *narrow-leaved*, and the *flag-leek*, the latter of which is by much the best—Some people like leeks better than onions; and they are better in soup —Sow in the fall, or, as early in the spring as you can.—About four yards square is enough. Put the rows eight inches asunder, and thin the plants to three inches apart in the row.—Hoe deeply and frequently between the plants till the middle of July, and then take the plants up, cut their roots off to an inch long, and cut off the leaves also a good way down. Make trenches, like those for *Celery* (which see), only not more than *half as deep*, and *half as wide apart*. Manure the trenches with rotten dung, or other rich manure. Put in the plants as you do the Celery plants, and at about five inches asunder. As the Leeks grow, *earth them up* by degrees like celery ; and at last, you will have leeks 18 inches long under ground, and as thick as your wrist. One of these is worth a dozen of poor little hard things. If you have a *row* across one of the Plats it will be plenty, perhaps. Such row will contain about a *hundred and sixty*. One third may be used, perhaps, before the winter sets in ; another third is taken up and put by for the winter, in precisely the same way that Celery is; the other third, covered in the same way that Celery is, will be ready for spring use.—See *Celery* .---Three leeks planted out for seed, will ripen their seed in August, and will give you seed enough for the *next year*, and some to give to five or six neighbours.

230. LETTUCE.—This great article of the garden is milky, refreshing, and pleasanter to a majority of tastes than any other plant, the Asparagus hardly excepted. So necessary is it as the principal ingredient of a *good salad*, that it is both in France and England called "salad" by great numbers of people. It is good in *stews :* good bolied with *green-peas* ; and, even as a dish boiled as cabbage is, it is an excellent vegetable. Yet, I never saw a really fine Lettuce in America. The obstacles are, the complete impossibility of preserving plants of the *fine* sorts in the natural ground during the winter ; and the *great heat*, which will not suffer those sorts to *loave*, if they be sowed in the natural ground in the spring.—The *hard* sorts are the *green cabbage-lettuce* (or *hardy green*), and the *brown cabbage*. These are *flat* plants. Their outside leaves spread forth upon the ground, and they curl into a sort of loaf in the centre. The plants of *these* may be preserved through the winter in the natural ground in the manner directed for *Endive plants* (which see under *Endive*) and may be sowed at the same time for that purpose. But these are very poor things. They have, though bleached at the heart, a slimy feel in the mouth ; and are not *crisp* and refreshing. There are, I believe, twenty sorts, two of which only it will be enough to mention, *green-coss* and *white-coss*, the former of which is of a darker green than the latter, is rather hardier and *not quite so good.* These when true to their kind and in a proper situation, rise up, and fold in their leaves to a solid loaf, like a sugar loaf cabbage, and, in rich land, with good management they will become nearly as large. When you cut one of these from the stem, and pull off its outside leaves, you have a large *lump of white*, enough for a salad for ten people, unless they be French, and, then you must have a lettuce to every person. Every body knows how to sow lettuce-seed along a drill, in the spring, to let the plants stand as thick as grass, and to cut it along with a knife, and gather it up by handfuls. But, this is not *lettuce.* It is *herbage*, and really fit only for pigs and cows. It is a raw, green, Dandelion, and is not quite so good.—The plants of these fine sorts may, indeed be kept through the winter in the same manner, and with the same care, as Cauliflower plants (which see in Paragraph 209) ; but, if this be not done, you must raise them in the spring in precisely the same way as the very earliest cabbage-plants, for which see Paragraphs from 77 to 94.—Put the plants out into the natural ground, about a fortnight before the general Cornplanting time. Do not put them in a place *full to the sun.* but in the east border, or in the west border. Make the ground *rich*, *right strong*, break it well, and, in transplanting, keep as much earth as you can about the roots, and give a little water ; and transplant *in the evening*.—These plants will *loave* about the time of the early cabbages, and some of them will not go off to seed for six weeks after they are loaved. So that, about two square feet of a hot-bed will give you a great quantity of *real* lettuces.—Let one plant (a very fine one) stand for *seed* ; and it will give you plenty of seed for a year or two.—Whenever you transplant Lettuces, give them a little water, and, if it be a small bed, *shade* them a little. If you sow in the natural ground in the spring, be sure to transplant into the shady borders.—And be sure always to make the ground *rich* for these fine Lettuces.

231. MANGEL-WURZEL.—This may be called *Cattle-beet*. Some persons plant it in gardens. It is a *coarse* Beet, and is cultivated and preserved as the Beet is.

232. MARJORAM.—One sort is *annual* and one *perennial*. The former is called *summer* and the latter *winter*. The first sown as early as possible in the spring ; and, the latter propagated by *offsets* ; that is, by parting the roots. The plants may stand pretty close. As the winter sort cannot be *got at* in winter, some of both ought to be preserved by *drying*. Cut it *just before it comes out into bloom*, hang it up in little bunches to dry, first, for a day, in the sun ; then in the shade ; and, when quite dry, put it in paper bags, tied up and the bags hung up in a dry place.

233. MARIGOLD,—An ANNUAL plant. Sow the seed, spring or fall ; when the bloom is at full, gather the flowers ; pull the leaves of the flower out of their sockets ; lay them on paper to dry, in the *shade*. When dry put them into paper bags. They are excellent in broths and soups and stews. Two square yards planted with Marigolds will be sufficient. It is the *single* Marigold that ought to be cultivated for culinary purposes. The *double* one is an *ornamental* flower, and a very mean one indeed.

234. MELON.—There are, all the world knows, two distinct tribes: the *Musk*, and the *Water*. Of the former the sorts are endless, and, indeed, of the latter also. Some of both tribes are *globular* and others *oblong* ; and, in both tribes there are different colours, as well with regard to flesh as to rind.—In this fine country, where they all come to perfection in the natural ground, no distinction is made as to *earliness*, or *lateness* in sorts; and, in other respects, some like one sort best, and some another. Amongst the Musk melons the *Citron* is, according to my taste, the finest by far; and the finest Water melons that I have ever tasted were raised from seed that came out of melons grown in Georgia —As to the manner of propagating, cultivating, and sowing the seed of melons, see *Cucumber*, and only observe, that all that is there said applies to melons as well as to cucumbers. To have melons a *month earlier* than the natural ground sowings will produce them is an object of much greater importance than to have cucumbers so much earlier; and, to accomplish that object, you have only to use the same means, in every respect, that I have described for the getting early cucumbers. The soil should be *rich* for melons but it ought not to be *freshly* dunged ; for that is apt to *rot* the plants, especially in a wet year. They like a light and rather sandy soil, and, any where near the sea, wood ashes, or sopers' ashes, is probably, the best manure, and especially in dry-bottomed land ; for ashes *attract* and *retain* the moisture of the atmosphere. It is a great mistake to suppose, that ashes are of a *burning* quality. They always produce the most and best effect in *dry bottomed* land.—Melons should be *cultivated* well. You should have but *one plant in a hill* ; and should till the ground between the plants, while they are growing, until it be covered by the vines. If the plants stand too close, the vines will be weak, and fruit small, thick-rinded, and poor as to flavour.

235. MINT.—There are two sorts: one is of a darker green than the other : the former is called *pepper-mint*, and is generally used for *distilling* to make mint water ; the latter which is called *spear-mint*, is used for the table, in many ways. The French snip a little into their *salads* ; we boil a bunch amongst green peas, to which it

gives a pleasant flavour; chopped up small, and put, along with sugar, into vinegar, we use it as sauce for *roasted lamb*; and a very pleasant sauce it is.—Mint *may* be propagated from seed; but a few bits of its roots will spread into a bed in a year.—To have it in winter, preserve it precisely like Marjoram (which see), and, instead of *chopping* it for sauce, crumble it between your fingers.

236. MUSTARD.—There is a *white seeded* sort and a *brown seeded*. The *white* mustard is used in *salads* along with the *Cress*, or *Pepper Grass*, and is sown and cultivated in the same way (See Cress.) The *black* is that which table mustard is made of.—It is sown in rows, two feet apart, early in the spring. The plants ought to be thinned to four or five inches apart. Good tillage between the rows. The seed will be ripe in July, and then the stalks should be cut off, and, when quite dry, the seed threshed out, and put by for use.—Why should any man that has a garden *buy* mustard? Why should he want the English to send him out, in a bottle, and sell him for a quarter of a dollar, less and worse mustard than he can raise in his garden for a penny? The English mustard is, in general, a thing *Fabricated*, and is as false as the *glazed* and *pasted* goods, sent out by the fraudulent fabricators of Manchester. It is a composition of *baked bones* reduced to powder, some *wheat flour*, some *colouring*, and a *drug* of some sort that gives the pungent taste. Whoever uses that mustard *freely* will find a *burning in his inside long after he has swallowed the mustard*. Why should any man, who has a garden, *buy* this poisonous stuff? The mustard-seed *ground in a little mustard mill* is what he ought to use. He will have bran and all; and his mustard will not look yellow like the English composition; but we do not object to Rye bread on account of its *colour!* Ten pounds of seed will grow upon a perch of ground; and ten pounds of mustard is more than any man can want in a year. The plants do not occupy the ground more than fourteen weeks, and may be followed by another crop of any plant, and even of mustard if you like. This, therefore, is a very useful plant, and ought to be cultivated by every farmer, and every man who hus a garden.

237. NASTURTIUM—An annual plant, with a half-red half-yellow flower, which has an offensive smell; but, it bears a seed enveloped in a fleshy pod, and that pod, taken before the seed becomes ripe, is used as a thing to *pickle*.—The seeds should be sown in the fall, or very early in the Spring. The plants should have pretty long bushy sticks put to them; and four or five of them will bear a great quantity of pods.—They will grow in almost any ground; but, the better the ground the fewer of them are necessary.

238. ONION.—This is one of the main vegetables. Its uses are many and they are all well known. The modes of cultivation for a crop are various. *Three* I shall mention, and by either a good crop may be raised.—Sow in the fall (See Paragraph 159,) or early in the Spring. Let the ground be *rich* but not from *fresh dung*. Make the ground very *fine*; make the rows a foot a part and scatter the seed *thinly* along a drill two inches deep. Then fill in the drills; and then press the earth down upon the seed by *treading the ground all over*. Then give the ground a *very slight* smoothing over with a rake.—When the plants get to be three inches high, thin them to four inches, or to eight inches if you wish to have very large onions. Keep the ground clear of weeds by *hoeing*; but do, not *hoe deep*, nor *raise earth* about the plants; for these make them run to *neck* and not to *bulk*.—When the tips of the leaves begin to be brown, bend down the necks, so that the leaves lie flat with the ground When the leaves are nearly dead, pull up the onions, and lay them to dry, in order to be put away for winter use.—Some persons, instead of sowing the onions *all along* the drill, drop four or five seeds at every six or seven inches distance; and leave the onions to grow thus, *in clumps*; and this is not a bad way; for, they will *squeeze each other out*. They will not be *large*; but, they will be ripe *earlier*, and will not run to neck.—The third mode of cultivation is as follows: sow the onions any time between April and the middle of June, in drills *six* inches apart, and put the *seed very thick* along the drills. Let all the plants stand, and they will get to be about as big round as the top of your little finger. Then the leaves will get yellow, and, when that is the case, pull up the onions and lay them on a board, till the sun have withered up the leaves. Then take these diminutive onions, put them in a bag, and hang them up in a dry place till spring. As soon as the frost is gone, and the ground dry, plant out these onions in good and fine ground, in rows a foot apart. Make, *not drills*, but little marks along the ground; and put the onions at six or eight inches apart. Do not *cover* them with the earth; but just *press them down upon* the mark with your thumb and forefinger. The ground ought to be trodden and slightly raked again before you make the *marks*, for *no earth should rise up* about the plants.—Proceed after this as with sown onions; only observe, that, if any should be *running up to seed*, you must *twist down the neck* as soon as you perceive it. But, observe this: the *shorter* the time that these onions have been in the ground the year before, the *less likely will they be to run to seed*.—Preserving onions is an easy matter Frost never hurts them, *unless you move them during the time that they are frozen*. Any dry, airy place will therefore do. They should not be kept in a *warm* place; for they will *heat* and grow. The neatest way is to tie them up in ropes; that is to say, to tie them round sticks, or straight straw, with *matting* (See *Endive*).—For seed, pick out the *finest onions*, and plant them out in rich land, in the spring.—To grow this seed upon a large scale plough the land into four feet ridges, lay plenty of dung along the furrows, plough the ground back over the dung, flatten the top of the ridge a little, and put along, on the top of a ridge *two rows* of onions, the rows seven inches apart, and the onions seven inches apart in the rows. When the weeds come, hoe the *tops* of the ridges with a small *hoe*, and plough first from and then to the ridges, two or three times at the distance of two or three weeks, as in the case of *Ruta Baga*, cultivated *in the field*.—When the seed is ripe, cut off the heads and collect them in such a way as not to scatter the seed. Lay them, on cloths, in the sun, till dry as dust; and then thresh out the seed, winnow it, and put it away. The seed will be dead ripe in August, and transplanted Ruta Baga, or Early York Cabbages, or even Kidney dwarf beans, or, perhaps, Buckwheat, may follow upon the same ground, the same year.—In a *garden* there always ought to be a crop to succeed seed-onions the same summer.

239. PARSLEY.—Known to every human being to bear its seed the second year, and, after that to die away. It may be sown at *any season* when the frost is out of the ground. The best way is to sow it in spring, and in very *clean* ground; because the seed lies long in the ground, and, if the ground be foul, the weeds choak the plants at their coming-up.—A bed of six feet long and four wide, the seed sown in drills at eight inches apart is enough for any family in the world.—But, every body *likes parsly*; and, where the winter is so long and so sharp as it is in this country, the main thing is to be able to *keep parsley through the winter*. It cannot be preserved *dry*, with success, like *Mint*, *Marjoram*, and the rest of the pot-herbs. It is possible to preserve it *green* because I have done it; but, it loses its *smell* and flavour. Therefore to have Parsley in winter you must keep it *alive*. If you have a Green-house (or you may do it even in any of the window seats of a house) half a dozen flower-pots, planted with stout plants in September, and taken into the house in November, will be sufficient. As soon as winter breaks up, put them out in the natural ground; and thus you have plenty of Parsley all the year round. However, Parsley may be preserved in the natural ground. You have only to put straw, or leaves of trees, or long litter, six inches thick on the bed, and to lay on something to prevent the covering from being blown off, (See *Endive*.) This will preserve its leaves from being destroyed; and when, you go to get it, you must lift up the covering, of a part of the bed, and put it down again.

240. PARSNIP.—As to the season of sowing, sort of land, preparation of ground, distances, and cultivation and tillage, precisely the same as the *Carrot*, which see, Paragraph 208. But, as to preservation during winter, and for *spring use*, the Parsnip stands all frost without injury, and even with benefit. So that, all you want is to put up for winter as many as you want during the hard frost, and these you may put up in the same manner as directed for Carrots and Beets.—The greens of Parsnips are as good for cow feed as those of Carrots; but, if the Parsnips be to stand out in the ground all the winter, the greens should not be cut off in the fall.

241. PEA.—This is one of those vegetables which all men most like. Its culture is universal where people have the means of growing it. The *sorts* of peas are very numerous; and I will mention a few of them presently.—The soil should be *good*, and *fresh dung* is good manure for them. Ashes and compost, very good; but peas, like Indian Corn, will bear to be actually sown upon dung. Never were finer peas grown than there are grown in the United States; and, as we shall presently see, they *may* be had, in the open ground, in Long Island, from first of June till the *sharp* frosts set in.—The sorts are numerous, one class is of a *small* size and the other *large*. The latter grow *taller*, and are longer in coming to perfection, than the former. The earliest of all is the little white pea, called, in Long Island, the *May-Pea*, and in England, the *early frame-pea*. Then come the *early Charleton*, the *Hotspur*, the *Blue Pea*, the *Dwarf*, and *Tall Marrowfats*; and several others, especially the *Knight Pea*, the seed of which is rough, uneven shaped and shrivelled, and the plant of which grows *very tall*.—All the sorts may be grown in America, *without sticks*, and even better than with. I have, this year (1819) the finest peas I ever saw, and the crop the most abundant. And this is the manner, in which I have sown and cultivated them. I ploughed the ground into ridges, the tops o which (for the dwarf sorts) were four feet apart, I then put a good parcel of yard-dung into the furrows; and ploughed the earth back upon the dung, I then levelled the top of the ridge a little, and drew two drills along upon it at six inches distant from each other. In these I sowed the peas. When the peas were about three inches high, I hoed the ground deep and well between the rows and on each outside of them. I then ploughed the ground from them, and to them again, in the same way as in the case of Swedish Turnips. In a week or two afterwards they had another ploughing; and soon after this they fell, and *lay down the sides of the ridges*. This was the way in which I managed all the sorts, only in the case of the *Knight Pea* I put the ridges at six feet asunder.—This was, of every sort, the very finest crop of peas I ever saw in my life. When

not sticked, and sown upon level ground, peas fall about *irregularly*, and, in case of much wet, the under pods rot; but, from the ridges they fall regularly, and the wet does not lodge about them You walk up the furrows to gather the peas; and nothing can be more beautiful, or more convenient. The culture in the garden may be the same, except that the work which is done with the *plough* in the field, must, in the garden, be done with the *spade*.—As to seasons, the early pea may be sown *in the fall*. See Paragraph 159. But, in this case, care must be taken to guard against *mice*. Sow about four inches deep, and tread the ground well down. When the frost *sets in* all is safe till winter breaks up. These peas will be earlier by ten or fifteen days than any that you can sow in the spring.—If you sow in the spring, do it as soon as the ground is dry enough to go upon. Sow the May Pea, some Charletons, some Hotspurs, some Blue Peas, some Marrowfats, and some Knight Pea, all at the same time, and they will come one after another, so as to give you green peas till nearly August. In June (about the middle) sow some early pea again and also some marrowfats and Knight Pea; and these will give you peas till September. Sow some of each sort middle of August, and they will give you green peas till the *hardish* frosts come.—But, these two last sowings (June and August) ought to be under the *South* fence, so as to get as much *coolness* as possible.

242. PENNYROYAL.—A medicinal herb. It is perennial. A little patch, a foot square is enough.

243. PEPPER.—See *Capsicum*.

244. PEPPER GRASS.—See Cress.

245 POTATO.——Every body knows how to cultivate this plant; and, as to its *preservation* during winter, if you can ascertain the degree of warmth necessary to keep a *baby* from perishing, you know precisely the precautions required to preserve a potato. As to sorts they are as numerous as the stones of a pavement in a large city; but, there is one sort earlier than all others. It is a small round, white potato, that has *no blossom*, and the leaf of which is of a pale green, very thin, very smooth, and nearly of the shape and size of the inside of a *lemon* cut asunder longways This potato, if planted with other sorts in the spring, will be ripe *six weeks* sooner than any other sort. I have had *two crops* of potatoes ripen on the same ground in the same year, in England; the second crop from potatoes of the first. Two crops could be raised in America with the greatest facility. But, if you once get this sort, and wish to keep it, you must take care that no other sort grow *with* it, or *near* it; for, potatoes of this kind mix the breed more readily than any thing else, though they have no *bloom!* If some plants of this blossomless kind grow with or near the other kinds, they will produce plants with a rough leaf, some of them will even *blow*, and they will *lose their quality of earliness*. This is quite enough to prove the fallacy of the doctrine of a communication of the *farina* of the flowers of plants.

246. POTATO. (Sweet).——This plant is cultivated in much the same way as the last. *Heat* is what it chiefly wants; and great care indeed must be taken to preserve it in winter.

247. PUMPKIN.—See *Cucumber*. The cultivation is the same, and every body knows the different qualities of the different sorts, and how to preserve and use them all.

248. PURSLANE.—A mischievous weed that Frenchmen and pigs eat when they can get nothing else. Both use it in salad, that is to say, raw.

249. RADISH.—A great variety of sorts. Sown *thin* in little drills six inches asunder. Sown as early as possible in the spring, and a little bed every three weeks all summer long. The early scarlet is the best. Radishes may be raised early in a hot-bed, precisely as cabbage-plants are.

250. RAMPION.—This is the smallest seed of which we have any knowledge. A thimble full, properly distributed, would sow an acre of land. It is sown in the spring, in very fine earth. Its roots are used in soups and salads. Its leaves are also used in salads. A yard square is enough for any garden.

251. RAPE.—This is a *field plant* for sheep; but it is very good to sow like *White Mustard*, to use as salad, and it is sown and raised in the same way.

252. RHUBARB.—This is one of the capital articles of the garden, though I have never seen it in America. The *Dock* is the wild Rhubarb, and if you look at, and *taste*, the *root*, you will see the proof of it. The Rhubarb plant has leaves as broad and long as those of the *burr dock*. It comes forth, like the dock, very early in the spring. When its leaves are pretty large, you cut them off close to the stem, and, if the plant be fine, the *stalk of the leaf* will be from eight inches to a foot long. You peel the outside skin from these *stalks*, and then cut the stalks up into bits about as big as the first joint of a lady's third finger. You put these into puddings, pies, tarts, just as you would green gooseberries and green currants, and some people think they are better than either: at any rate, they are full *six weeks earlier*. The plant, like the dock, is *hardy*, is raised from *seed*, from the *roots*, will grow in any ground, though best in rich ground; and the same plants will last for an age. It is a very valuable plant, and no garden ought to be without it. I should think, that a hundred wagon-loads of the stalks are yearly sold in London. A bunch which you can clasp with your two hands sells for a shilling or two in the very early part of the season; and that is nearly half a dollar. This circumstance sufficiently speaks its praise.

253. ROSEMARY is a beautiful little shrub. One of them may be enough in a garden. It is propagated from *slips*, taken off in the spring and planted in a cool place.

254. RUE.—Still more beautiful. Propagated in the same manner. One plant of the kind is enough.

255. RUTA BAGA.—(See *Turnip*.)

256. SAGE is raised from seed, or from slips. To have it at hand for winter it is necessary to *dry it;* and it ought to be cut, for this purpose, *before it comes out into bloom*, as, indeed, is the case with *all other herbs*.

257. SALSAFY, called, by some, *oyster plant*, is good in soups, to eat like the *parsnip*. It is cultivated like the parsnip, and, like it, stands out the whole of an American winter.

258. SAMPHIRE is propagated from seed, or from offsets. It is perennial, and is sometimes used as a pickle, or in salads.

259. SAVORY.—-Two sorts, *summer* and *winter*. The former is annual, and the latter perennial.

260. SAVOY.—See *Cabbage*, Paragraph 201.

261. SCORZENERA.—This is only another kind of SALSAFY. It is cultivated and used in the same manner as Salsafy is.

262. SHALOT.—A little sort of Onion, which is taken up in the fall and kept for winter use. Each plant multiplies itself in the summer by adding offsets all round it. One of them is a plant to put out in the spring to produce other offsets for use and for planting out again. They should be planted in rows six inches apart, and four inches apart in the rows. The ground should not be wet at bottom, and should be kept very clean during the summer.

263. SKIRRET is cultivated from its root, which is used in soups. It may be raised from seed, or from offsets. It is perennial, and a very small patch may suffice.

264. SORREL.—This is no other than the wild sorrel cultivated. It is propagated from seed, or from offsets. It is perennial. The French make large messes of it; but a foot square may suffice for an American garden.

265. SPINACH.—Every one knows how good and useful a plant this is. It is certainly preferable to any of the cabbage kind in point of wholesomeness, and it is of very easy cultivation. There is, in fact, but *one sort*, that I know any thing of, though the seed is sometimes more *prickly* than at other times. To have spinach very early in the spring, sow (Long Island) on or about the first week of September, in drills a foot apart, and, when the plants are well up, thin them to six inches. They will be fine and strong by the time that the winter *sets in;* and, as soon as that time comes, cover them over well with straw, and keep the straw on till the breaking up of the frost. Sow more as soon as the frost is out of the ground; and this will be in perfection in June. You may sow again in May; but the plants will go off to seed before they attain to much size. If you save seed, save it from plants that have stood the winter.

266. SQUASH is, in all its varieties, cultivated like the *Cucumber*, which see.

267. TANSY, a perennial culinary and medicinal herb, propagated from seed, or offsets. One root in a garden is enough.

268. TARRAGON is a very hot, peppery herb. It is used in soup and sallads. It is perennial, and may be propagated from seed, or from offsets, or slips, put out in spring. Its young and tender tops only are used. It is eaten with beef-steaks in company with minced shalots. A man may live very well without it; but, an Englishman once told me, that he and six others once eat some beef-steaks with Shalots and Tarragon, and that "they voted unanimously, that "beef-steaks never were so eaten!" It must be dried, like *mint*, for winter use.

269. THYME.—There are two distinct sorts. Both are perennial, and both may be propagated either from seed, or from offsets.

270. TOMATUM.—This plant comes from the countries bordering on the Mediterranean. In England it requires to be raised in artificial heat, and to be planted out against warm walls. *Here* it would require neither. It climbs up very high, and would require bushy sticks. It bears a sort of apple about as big as a black walnut with its green husk on. Its fruit is used to thicken stews and soups, and great quantities are sold in London. It is raised from seed only, being an annual; and the seed should be sown at a great distance, seeing that the plants occupy a good deal of room.

(To be Continued.)

TO THE EDITOR OF THE AMERICAN FARMER.

Sir—I wish to be made acquainted through the medium of your useful journal, with the most approved method of making capons. No doubt many of your subscribers are able, and willing to give the information. S. S.

Arundle Cottage, Feb. 1st, 1823.

The writer is respectfully informed, that he will find correct information in Vol. 3, No. 24, page 192; yet any thing in addition would be thankfully received.—*Edit. Am. Farmer.*

FOR THE AMERICAN FARMER.

CULTURE, EXPENSES AND PROBABLE PRODUCE OF ONE ACRE OF LAND IN GRAPE VINES, FOR SEVEN YEARS.

FIRST YEAR.

Price of one acre of good land, except near large towns,	$50 00	
Fencing an acre,	25 00	
Cuttings of vines for one acre,	26 00	
610 poles or stakes, at 2 cents each,	12 20	
Digging 610 holes to plant the cuttings in, at 2 cents each,	12 20	
Planting the cuttings and stakes at 1 cent each,	6 10	
Total capital employed,		$131 50
Interest for one year on the above capital,	7 89	
First ploughing say $2, two other ploughings at $1 25, to prepare the ground,	4 50	
Three harrowings at 50 cents each,	1 50	
Harrowing and hoeing about the vines three times in the course of the summer, to keep down the weeds at $2 50 each time,	7 50	
Manure the first year—say	10 00	
Interest and first year's expenses,		$31 39

SECOND YEAR.

Pruning and digging with the spade three feet on each side of the vines—*(the pruning this year is very trifling,)* say	$15 00	
305 poles 14 feet long, to tie horizontally to the stakes two feet from the ground, to tie the shoots of the vines to, at 3 cents	9 15	
Annual decay of poles, say 20 per cent.	2 44	
Harrowing and hoeing three times, as above, at $2 50,	7 50	
Additional attendance, as there will be more pruning than last year,	5 00	
The 305 poles being part of the capital, must be added to the capital of last year, makes it $140 65.—Interest on it	8 44	
Second years expenses,		$47 53

THIRD YEAR.

The same as last year,	$47 53	
610 additional poles 14 feet long, at 3 cents, to tie to the stakes horizontally, at four and six feet from the ground,	18 30	
Adding the $18 30 to the capital, makes it $158 95. Additional interest,	1 10	
Third years expenses,		$66 93

This year, if the vines are properly attended to, there will be plenty of grapes for the table, and if permitted to hang on, to make some wine. On this acre the vines are supposed to be planted in rows twelve feet apart, and six feet distant in the rows, and after leaving three feet on each side of the vines, there will be six feet to spare between the rows, which for these first three years may be planted in potatoes, beans, peas or any other meliorating crop, which would help to pay part of the above expenses, though I have not given any credit for it. After this year nothing must be planted between the rows of the vines.

FOURTH YEAR.

The same as the third year, except the purchase of poles, &c. which is to be deducted, which leaves,	$48 63	
Annual wear and tear or loss of poles, 20 per cent. on the whole cost,	7 92	
Additional labour this year in pruning the vines and keeping them in order, and in their places when misplaced by the wind, &c. say	15 00	
Picking 150 bushels of grapes in the bunches at six cents per bushel,	9 00	
Picking 150 bushels off the bunches and bruising them, 10 cents per bushel,	15 00	
Six hogsheads to ferment the grapes in after being bruised,	15 00	
Fourteen barrels to put the wine in,	14 00	
3 cwt. Sugar, white Havana, the best, at $14	42 00	
Two persons to attend to the fermenting hogsheads, for, say 20 days, at $1 50 per day, by which time the wine may be got into the cellar,	30 00	
Fifteen dollars in hogsheads added to the capital. Interest on it,	90	
	$197 45	
Manure this year,	10 00	
Total expenses this year,		$207 45
		$353 30

Amount brought up,		$353 30

FIFTH YEAR.

The capital now is, by adding the price of the hogsheads, $173 95—interest on it,	$10 44	
All other expenses the same as last year—the manure, hogsheads, and $3.44 interest, to be deducted out of the first of the fourth year's expenses—the whole interest for the year being charged this year in the first item, leaves	174 01	
Total expense, the fifth year		$184 45
The sixth and seventh year's expenses, the same as the fifth year—except in the seventh year, the expense of sugar probably will not be necessary; for, as the vines grow older, the grapes become richer: that is, they have more of the saccharine quality in them. Deducting the price of sugar one year, these two years amount to		$306 02
The total expense in seven years is		$843 77
Probable produce, 1600 gallons of wine in the last four years, at $1 per gallon, amounts to	$1600	
Showing a profit in the whole seven years, of		$756 23

And here it is to be remembered, that if the vines grow on a farm, especially if south of Pennsylvania, the owner will be paid for all the labour of his hands, the interest on his money laid out, &c., and will probably have the poles on his own land, so that he would not have to pay any money for them. The only money that he would have to pay out, would be for the vine cuttings, the hogsheads, barrels and sugar, amounting to $223, in seven years—and the balance of $1600 would all be furnished within his own premises; being $1377 for the interest of money advanced, materials furnished by him, the labour of his hands, and profit.

After the seventh year, the annual expense in labour, &c., will probably be $180—and the annual average produce will be $400—leaving a ballance of $220 profit per acre.

The average quantity of juice from the hogshead or vat, will probably exceed 450 gallons, from an acre, and if it is obtained clear, the sediment will be trifling; so that 400 gallons of wine may be calculated on, fit for use. And where sugar is used, as twelve pounds of sugar make one gallon of liquid, 3 cwt. of it will give 28 gallons—and if brandy is added at the rate of ten per cent, there will be about 40 gallons more to add—so that 450 gallons, I think, may be safely calculated on, fit for use or sale. *I am now satisfied that when there is a sufficiency of saccharine matter in the juice, brandy is unnecessary*—but I find it very difficult to convince others of this fact.

I intend to begin to prune my grape vines to day, and if any gentlemen wish to be supplied with cuttings, I will send them to any part of this district, to Baltimore, or Norfolk, upon referring me to some one in the district of Columbia for the payment. I will put them up in strong cloth and damp moss, so that they may be carried any distance with safety, and keep good for five or six weeks.

I charge one dollar per dozen cuttings.
——— five dollars for 120 cuttings.
——— twenty dollars for 600 cuttings.

The Bland Madeira, the Tokay, Schuylkill, Muskatel, and Constantia, all make good wine, and are tolerable for the table. I have also the Worthington grape—a very great bearer. I have not enough of this yet, to make a separate cask of wine, consequently I have mixed them with others. But I am inclined to think it will make a very good red wine.

I have also the Sweet Water, the Miller Burgundy, Royal Muscadine, Frontinac, &c. These latter are exclusively for the table, except the Miller Burgundy, of which I made a barrel of wine, this last season, that I hope will make Champagne, as it is one of the grapes from which that wine is made in France.

I finished racking my wine, last week—there were,	*Galls.*
Seven barrels of 32 gallons each,	224
Six quarter casks of 28 gallons each,	168
One small cask of 12 gallons,	12
Total gallons	404
But there were 3½ cwt. of sugar used, and as 12 lbs. make one gallon of liquid, 32 gallons of the above were produced by the sugar.	
And two quarter casks, or 56 gallons, were spoiled by being put into casks, that had red wine in them, that came from the Mediterranean, which deducted from the whole quantity,	56
Left to be racked,	348
And I have racked off fine and bright, so that there will be scarcely any sediment from this—about	310
Which left, or ought to leave, of lees, save what was lost by evaporation, about Galls.	38

When the grapes are fermented in the skin, after being bruised and left until the pummice, if it may be so called, has risen to the surface before the juice is drawn off, and if this is obtained without pressure, there will be very little lee in it. The reason of there being, as before stated, so much as 38 gallons of lee, was my having mixed the wine pressed from the pummice, with that which came off without pressure: that which is pressed after fermentation, always having more mucilage than when it is drawn off without pressure.

If you think the above worth publishing, or any part of it, please insert it in your paper, as it will save me a good deal of trouble in answering queries that are very often put to me by letter and otherwise—and it will enable any person to make a calculation of the expense, according to his own ideas. I think one or two acres of vines may be cultivated by any gentleman in the country, who keeps a gardener and who has house servants, with very little expense, and it will at the same time be an agreeable amusement to him. For I think it as rational to have a small vineyard, as it is to have an apple, peach, or any other fruit orchard.

One hundred and fifty bushels of grapes to an acre, may appear a great quantity to those who have not seen them growing in vineyards. But the four-tenths of an acre that I measured, averaged more than one peck to the vine, and it was the first year of their bearing; and I have no doubt in my own mind, that an average of four years will produce more. The rows 12 feet apart, and the vines 6 feet distant in the rows, will make 607 vines on an acre.

JOHN ADLUM.

IRON LIFE-BOAT.

Fig. 1.

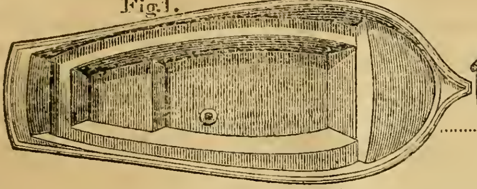

Fig. 2.

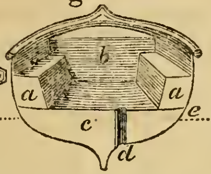

Fig. 1. View of the Iron Life-Boat, from above.
Fig. 2. Section of the same.
a and *b* Cavities under the seats and at the stern of the vessel.
c Cavity between the floor and bottom.
d The well.
e Water-line of the boat.

It is evident, that if the well be left entirely open the water cannot rise in it higher than the level of its surface without; and any water that may be taken in, over the sides, will sink down the well until it finds its proper level.

FROM THE LIVERPOOL KALEIDOSCOPE.

TO THE EDITOR.

Sir—Accounts of shipwrecks, and abandonments at sea, have come before us very frequently of late. The suffering, and loss of life, occasioned by such misfortunes, must be lamented by all; and will, no doubt, insure a favourable reception to every attempt that may be made to remedy the evil. The most obvious method that presents itself to the mind, of accomplishing this desirable object, is that of providing a life-boat for every vessel that goes to sea. The neglect of this practice must have arisen from the general unfitness of such boats for common use. To remove this obstacle, I have constructed a life-boat of a different description, which I beg leave to submit to the judgment of the public. I believe it will be found to possess all the essential properties of a life-boat, and to be capable, at the same time, of answering the common purposes of a ship's boat.

Should the adoption of this boat, be the means of lessening the number of victims who annually fall a prey to the devouring waves, and of abridging thereby the sum of human misery, I shall not consider the time I have devoted to the subject as spent in vain.

The description of the life boat which I recommend, is as follows;—It is made of wrought iron plates, and furnished with a number of air-tight cavities, the buoyancy of which renders it impossible that it should sink. The plates are rivetted together, somewhat in the manner of steam-engine boilers, but so as to present no obstruction to the passage of the boat through the water. Some of the cavities are formed in the spaces underneath the seats, and two others are formed at the stem and stern of the boat. The principal use of these particular cavities is to prevent the boat upsetting, which they will do, even should the gunnel or side of the boat be forced considerably under water. Another and much larger buoyant space is formed between the bottom of the boat and false bottom or floor on which the feet of the passengers rest: this floor is fixed a little higher than the level of the water, even when the boat is "set down," with a moderate load. A pipe or well is made to pass directly down through both bottoms and through the cavity between them, so as to allow the water a free passage without admitting it into the cavity. The effect of this construction is, that besides the buoyancy acquired, the boat will discharge itself of any quantity of water it may happen to ship in a rough sea. Should the boat be loaded deeper than the level of the floor, the water is prevented from rising into the interior of the boat by means of a valve.

In order to show the practicability of the plan, I have built a boat, which nearly answers to the above description. It is seventeen feet eight inches long, six feet wide, three feet deep, draws fourteen inches water, and weighs twenty-eight hundred, two quarters, and twenty pounds. The experienced seaman, on inspection of this boat, will, no doubt, be able to discover many defects in its shape—but I beg him not to let this circumstance prejudice his mind against iron life-boats in general. The one to which I refer was built in a great measure from written descriptions, and by a workman who never resided in a sea-port town. Objections of this nature may, therefore, be expected, but will be easily obviated in any future attempt. To meet those that may be advanced by interested persons against the material of which my life boat is made, I request a candid consideration of the following reasons in favour of the use of Iron, in the construction of boats of every description:—

1.—Strength and Tightness. With iron, a boat can be built of any strength that may be required. The tenacity of the material is so great, and the joints that can be made with it are so perfect, that boilers of considerable magnitude are in daily use, bearing a pressure of steam within, equal to one hundred pounds upon every square inch of their surface; and they are commonly first proved with a pressure of four hundred pounds to the square inch.* If an iron boiler can be made to resist this enormous internal pressure, we may confidently conclude, that an iron boat, constructed in a similar way, will be adequate to sustain any external force, which it is likely to encounter from the buffeting of the waves.

2.—Durability. The considerations under the last head apply with equal force to this; but to these I would add, that an iron boat is not subject to injury from the effects of the sun; nor from the still more injurious attacks of the worms in southern latitudes. The oxidation of the iron, which will appear to some to detract much from its durability, will be found of very little moment in practice.

3.—Rate of sailing. The smooth surface of iron, and its very great elasticity, must lead to the conclusion, that a vessel, built of this material, will sail faster than one of the same size and shape built of wood.

4.—Capacity for burthen. It is found to hold universally, with respect to canal boats, that those made of iron (of which there are numbers constantly in use) will carry a larger cargo than wooden boats of the same size. The result must be the same, however you may modify the shape of the boat, or in whatever mode of navigation it may be employed.

5.—Cost. It will be expected that I should say something of the comparative cost of the common, and the proposed boats. This I can only speak of at present on conjecture; I think I may however safely state, that iron boats, with the safety apparatus included, will not exceed the cost of wooden ones, more than fifty per cent.—Even at this rate, and considering them only in the light of common boats, they will be the cheapest in the long run. But as the facility of making them will increase by practice, and by the invention of Machinery, I should not be surprised to see them sold much lower than wood ones, before the lapse of many years.

Any gentleman desirous of trying my boat, may put it to what proof he thinks proper, on application to Mr. Parry, boatman, who has the care of it, at the George's Dock, ferry basin. A model, shewing clearly the principle on which it acts, I beg permission to lodge for inspection at the office of the Mercury newspaper. And any further information on the subject that is desired, I shall be happy to communicate as far as lies in my power.

I am, Sir,
Your obedient servant,
THOMAS JEVONS.

Liverpool, September, 1822.

TO THE EDITOR OF THE AMERICAN FARMER.

WOOL—*Farmers invited to report the quantity annually obtained per head from their flocks.*

White Post, Frederick County, Va.
20th January, 1823.

Dear Sir,

More than a twelve month past an invitation was given to the growers of wool, through the medium of your useful pages, to furnish information in the form of annual reports, that the farmers might compare the value of the different breeds of sheep, and trace their improvement from year to year. It was hoped that the adoption of some such plan would bring together information on the subject, from various quarters, productive of considerable advantages; not merely to the breeders of sheep, by suggesting intermixtures, &c. &c., but to the country at large, by favouring the improvement of our different manufactures of wool. The invitation, as yet, appears to have been neglected: will it be too officious, again to urge the importance of the measure, and set the example by way of commencement? We plain farmers are too often under an impression, that it is necessary to write in a handsome style and technical manner, to make the offering acceptable. But, waving such scruples, I will now mention the result of my last shearing, which took place in June 1822 The average, as per certificate, which I hold, is nearly 7 lbs. per head; that of the previous year was about 8 lbs. This apparent falling off, of a pound in the fleece, is to be accounted for in my having parted with 20 of my best sheep, in March last, to one of your butchers, which left me but few wethers and a large proportion of ewes, with lambs by their side, in my flock. These circumstances taken into consideration, I am satisfied that there has been a considerable improvement in my flock, since the shearing of 1821. The number shorn in June last, was as follows:

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* *The bursting point of high pressure boilers is from one thousand to one thousand two hundred pounds upon the square inch.*

Ram long wool	1	weighing	45½	average	9 1-8 nearly.
Wethers, do	4				
Merino,	13	do	68½	do	5 1-4 nearly.
					lb. oz.
Long wool Ewes the Bakewell cross on the Merino Ewe.	21	do	156½	do	7 7 nearly.
	39		total 270½		average 7 nearly.

—unwashed, but the tags excluded. Having sheared my sheep at some distance from the house, I have not been so particular as I could have wished in selecting samples, and ascertaining the relative weight of carcase to the wool—and I am unwilling at this time to hazard an opinion on that head—but if you think such memorandums would be useful, I will endeavour, at the next shearing, to be more attentive to facts that relate thereto.* I have been induced to adopt a cross of the long wool, on the Merino, with a view to a greater quantity of wool, better adapted to domestic purposes, anticipating also a restoration of such mutton, as we formerly had from our improved English breeds: in which expectation I have not been disappointed, having already obtained a cross of large size, affording excellent mutton, and carrying a heavy fleece much superior in quality to those of my former Bakewell race, or more strictly speaking, Arlington, long-woolled sheep. I was indebted to Mr. George W. P. Custis, for the origin of a remarkable ram, of that breed, which I raised in the year 1807 or 8, the premium ram of that period, in this county. This cross, although I believe it is deprecated in England, I shall continue, by selecting Rams of the longest, closest, finest wool, so long as the fibre increases in length, without diminishing too much its fineness and closeness. As far as I have gone, which is about the third cross, I find the wool to have exchanged its merino softness, for a silky quality less adapted, to be sure, for broad cloth, but much more useful for our country purposes, and yielding nearly double the quantity of the merino, when both have been completely cleaned of the dirt, and prepared for the cards. This difference is explained by the half blood having a greater surface, than the merino, double the length of wool, and an increased thickness, as they partake of the merino, which possesses this quality, in a remarkable degree.

I am respectfully,
Yours, &c. &c.
R. K. MEADE.

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* We shall be glad to obtain and record such details: as every report of facts serves to give knowledge to our readers, which enables them to institute comparisons, that must tend to their advantage. The weight of carcase, the proportions of its different parts, and the period of maturity, are items too important, to be overlooked in any estimate of the value of different breeds of sheep. Indeed it would difficult to err by multiplying comparative points of observation.—*Ed. Am. Farmer.*

* * *

White Post, Frederick County, Va.
January 20, 1823.

NAPLES CATTLE—AN EXCELLENT BREED.

Dear Sir,

Permit me to add my testimony to that of Capt. Jacob Jones, in favour of the Naples cattle. Having spent two or three weeks there in Dec. 1804, I had frequent opportunities of seeing their cows and work oxen, although I do not remember to have seen a bull. Previously having been a farmer, and accustomed to see fine cattle here, and in the New England States, my attention was naturally drawn to a comparison between foreign stock, and our own. I have always mentioned the Naples to my friends as the finest cattle that I had ever seen. My impression has always been that they were of a light dun colour,* but I must presume I am mistaken, since Capt. Jones has so recently viewed them. Their oxen were large enough when fat to weigh from 1000 to 1200—appeared to be animals of great frame, and had uncommonly large horns; they were worked in large sized horse carts, single, and hauled a burthen I believe often exceeding a ton, with ease—they were very docile. With respect to their peculiar form, I am not aware of any positive recollection, being chiefly attracted by their commanding appearance, and the great loads they moved. The form of their cows I well remember—clean made, square built, and bulky, with sufficient frames to weigh six, seven, and probably eight hundred, when fat—they were beautiful, looked well adapted to the butcher, and in a superior degree to the pail—if the distance of 18 years has not changed my recollection of them, I can safely recommend an importation of some of their cows.

R. K. MEADE.

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* The Bull and Cow, imported by Com. Stewart, when he returned from his command in the Mediterranean, were, as we have understood, of a dark cream colour; we should be glad to know into what hands his cattle, which we know he highly prized, have fallen, and what is the promise of the progeny of his bull, which ought now to be numerous, in the neighbourhood of Burlington.—*Edit. Am. Farmer.*

* * *

TO THE EDITOR OF THE AMERICAN FARMER.

A NEW METHOD OF PRESERVING VINES FROM BUGS.

Bedford, West Chester Cy. N. Y. Jan. 31, 1823.

Sir,

Having lately received from your agent at New York, Mr. Coleman, the three volumes of your American Farmer, I observe in one of them, a request from you, to be furnished with good melon seed, by any gentleman who may have them. The useful information I have received from your work, has laid me under no small obligation to you, and I shall feel happy, in rendering you any assistance in your laudable endeavours to procure and disseminate valuable seeds.

I enclose a few Musk melon seeds, of a kind much superior to any I have ever met with. We received the seeds by the name of *Persian melon.* Its size is large, and its flavour delicious. It is, however, rather late in ripening. We have raised this kind for the last eight or ten years, and *always on the same spot,* without discovering the slightest depreciation. We last year adopted a contrivance (on the recommendation of another,) which I regard as of very great importance in the cultivation of melons. As soon as the young plants appeared, we put over them a box consisting of four pieces of shingles, or thin boards, nailed together, one foot long, and about eight inches broad—over the top of this box is stretched, a thin piece of worn out muslin, or millinet, and the edges fastened with tacks to the side of the box. This cover, while it admits the air and light, protects the plants *effectually* from bugs and flies, and shields them from cold winds and frosts. The difference in the growth of the plants thus covered, and those which were left unprotected, was almost incredible, and I observed that while the latter were parched with the drought, the soil round the others was constantly moist, and their leaves in the morning were loaded with dew.

Should you desire it, I can furnish you with Onion seed of a very superior quality—large flat, white onion—a kind we have raised in our garden for more than twenty years; and although for nearly the whole of that time planted every year in the *same beds,* we have never found it necessary to change our seed.—As I find it more convenient to receive your volume at the end of the year, than in weekly numbers, should you wish for this, or any other seed in my power to furnish, an intimation to that effect by *mail* will be necessary.

With the best wishes that your work may be not less advantageous to yourself, than it is useful to the public, I have the honour to be Sir,

Your obd't servant,
—— ——

John S. Skinner Esq.

From the writer of the above, we should be happy to hear frequently—and we take this occasion to explain as to seeds of vegetables, melons, vines, flowers, grains, &c., that when they can be recommended as of a quality in any degree *superior* to what is in common use, of the same kind; we shall always esteem it a favour to be supplied with small portions,—together with an explanation of the particulars wherein that superiority consists, and some brief directions as to cultivation, uses, &c., and we reiterate this request, not for any use that we ourselves can make of them, for we have found that we have no leisure for practical experiments. It is quite as much as one head and one pair of hands can do, to superintend the business of a large Post Office, and at leisure times to keep up a course of reading and do the writing necessary to conduct a journal which has for its object, to improve the science, and practice of a pursuit in which the whole nation may be said to be engaged.—When seed such as we have mentioned are received, they are sent again in all directions. They move, as by centripetal and centrifugal motion, from, and to every point of the compass, and thus are the good things of Horticulture and Agriculture widely and equally diffused.

TO THE EDITOR OF THE AMERICAN FARMER.

Montague, Dec. 10, 1822.

VEGETABLE AND ANIMAL PRODUCTIONS OF TEXAS.

Dear Sir,—Having perused with considerable interest, a few numbers of your valuable paper, it induces me to send you some observations made during an excursion to the Southward, last summer. Parts of the months of May, June and July, I was exploring the Province of Texas, where I observed a variety of new (to me) vegetable productions; and many others, with which I was acquainted——but, the luxuriant difference of their growth, owing to the more congenial temperature of the Texas atmosphere, produced so astonishing a change, as afforded me almost as much gratification as the discovery of a new species. I particularly remarked the prickly pear, which grows abundantly, bordering the coast of the Gulph, and around the bay of St. Bernards. One stalk I measured, was four and a half feet in height; a staunch trunk, apparently formed of the leaves, but grown thick and strong in the requisite proportion, to support the new productions that projected from around it in great numbers; some of which, were quite 12 inches, on the middle leaves or branches. Blossoms were putting forth, one of which appeared to have arrived at maturity, measured about 4 inches in length. A Mr. Vance, with whom I conversed, and who had spent the last six or eight years in the different provinces of Mexico, informed me that in ——— Province, (where he contemplated spending the remainder of his life,) it arrived to much greater perfection than in Texas—so much so, that he intended trying the experiment of enclosing his fields with it, by digging a small trench, and setting the largest and most flourishing leaves with their edges in contact with each other. He felt satisfied, that in less than three years, it would form a barrier impregnable to either man or beast; and from the growths I saw, I have full faith in the correctness of his theory.

Bordering the streams, I observed a great variety of grapes. One species, on the last of May, were about the size of the Madeira grape, although it was quite a month previous to their ripening—consequently, I could form no opinion of their quality I am satisfied they do not partake of the Fox species, the vine and leaf being quite different. Another production of the country, which I much admired, was the running rose. (I believe it is also a native of Louisiana.) It blooms early in the season, producing a blossom very similar to the Burgundy rose; but its running is the most astonishing quality relative to it. One stalk I saw, was quite 30 feet in length. Many of the inhabitants of Louisiana have them planted at one corner of their dwelling, and by being careful to nail them up as their length increases, they will in time have a living wreath around their residence; which, when in bloom, forms a most beautiful appearance.

In my excursions through the country, I visited several tribes of Indians. Some of them appear to have many of the habits and customs of civilized life—for instance, their living in well built cabins, cultivating the soil, rearing cattle, and horses, &c. &c. On visiting the Conchetta tribe, residing on the waters of the Trinity, I was much astonished to observe some customs among them, which appear to me to be of a religious origin. The green corn dance; or, feast of the first fruits, appear very similar to some of the laws and regulations resembling the Jews—and the respect with which the custom is venerated, and the tenacity with which they adhere to all the minutiæ of its forms, will be proven by the following occurrence:——After traversing for some days through a region destitute of inhabitants, either aborigines or emigrants, I arrived at an Indian habitation, and with great pleasure, observed a field of corn adjoining the hut, which appeared to be just in perfection for eating. After the usual introduction of shaking hands, and a few enquiries relative to my further rout, I made application for the purchase of some new corn, although I observed the squaws preparing a dish of fish and beans to set before me, yet being a great lover of young corn, and it so great a rarity, I persevered in my application, and which appeared to produce some weighty consultation. Not before having any difficulty in conveying my ideas, which were all by signs, I concluded they were either very stupid, or were determined not to understand me—but to place the matter beyond being misunderstood, I tore an ear from its stalk and laid down some silver, and desired six ears for it. A boy, after some hesitation, was despatched for them. I directly placed one by their fire to roast, which was immediately opposed by the whole family, with some warmth. It then struck me, there was some superstitious reason for opposing it. I desisted, but taking some fire with me for the purpose of forming one near the door, (where there was abundance of fuel,) but in that I was again disappointed—the same objection was raised as before. I was then handed some spunk, steel and flint, to strike fire for myself—the day then was fast declining, and wishing to reach the village six miles further, I declined their offer, and after partaking of their beans and making some presents to the boys, I departed, and reached the town previous to sun down; where we were kindly received. I was pleased to find one of the natives, who spoke a little bad English. The king, and a number of others assembled on seeing us arrive, and we were solicited to partake of whatever they had—but determining not to burden them, as their provision was scarce, I directed my comrade to prepare supper; and the corn which had been brought on, was accordingly produced for the purpose of cooking—I observed it produced the same agitation and excitement, as at the place where we procured it. After some private talk among themselves, the one who spoke English, came forward with a request from the king, that the corn would not be eaten in their village *then;* that it was an established custom among them, (and deemed almost sacrilegious to act otherwise)—not to eat their new corn, until the "CORN DANCE" was over—the third ensuing day it was to take place, and would continue two, three, or four days, according to the determination of the heads of the tribe, when assembled. Contemplating to remain two days among them to rest our horses, we thought it best policy to comply with their request.

On a water excursion in the Bay of St. Bernard, I saw several singular animals, somewhat resembling the fresh water soft shell Turtles, from 12 to 30 inches diameter.—being ignorant of their dangerous qualities, I attempted to seize several by the tails, and was some time within an inch of succeeding; on relating this circumstance when I returned on board the ship, Dr. ——, who had been a resident some time on the coast, informed me, I might thank my stars I did not succeed in grappling one; that they possessed a poisonous quality, by inflicting a wound with the tail, which produced almost instantaneous death, but with the most excruciating pain. He had been witness of its effects* but a short time previous, in the person of a young stranger; the wound was inflicted in the palm of the hand, which appeared to affect the system similar to the bite of the Rattle snake, but was more rapid and certain in its progress. It is of the species called stinging Bat, vulgarly called the 'Sting-a-Ree'—I did not put full faith in the Doctor's statement, until it was confirmed by indisputable authority, and then, rest assured, I felt very grateful for my escape. Their appearance in water is similar, at a little distance (as before stated) to the Turtle. On a nearer view, the head and its posteriors resembles the Bat with extended wings. On moving through the water, they wave the sides of their apparent shells, which propels them through the water, together with the aid of three feet; the tails appear to be about one third of the length of the body, near the root of which, project the stings resembling cock spurs, and very brittle; decreasing in length to the termination of the tail. When the wound is inflicted the sting breaks off, leaving the broken part in the wound. This latter account is on the authority of others.

Your's respectfully,

J. C. L.

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* It is more probable that the effect was that of lockjaw, which is often produced by slight punctures of the sinews, in the palm of the hand.

Edit. Am. Far.

Milledgeville, January 1, 1823.

TO KILL VERMIN.

MR SKINNER,

Some one of your correspondents some time since enquired how the vermin were to be destroyed, or in other words, were to be prevented from destroying our poultry. It saved me the trouble of making the enquiry, and I have since tried every method recommended without success.

I have just been informed by a very notable housewife, who I have long known as a very successful raiser of poultry, that an effectual and indeed the only effectual remedy is to *burn your hen house.*

This method may seem extraordinary, and methinks I see some of your readers throwing by your paper in a pet, but I must ask their patience a moment until I state the manner.

1st. In a wet season, spread the floor of your hen house with dry straw as much as two inches deep, then take from your nests the straw or other materials of which they are made, and place them on the straw in the middle of the house, set fire to it, to guard against accident, have a careful hand or two by, with vessels of water, ready to extinguish any fire which may catch to the house.

2d. Two hands are next to be provided, one with a vessel of water, and the other with a supply of dry straw, of which he is to fire a handful at a time, and use it as good housewives do a kettle of boiling water, when they wish to get clear of certain other little animals, that sometimes are troublesome to beds, and bed rooms, viz: to search with the flame, every crack or cranny, which by any possibility might serve to shelter the vermin. The use of the water is of course, to prevent any accidents arising from the use of the burning straw; this operation is to be very particularly performed, and no part of the house is to escape, and if well done at first, and your house is once effectually rid of them, the business need be repeated only twice a year, once in the spring, and once in the fall.

3d. Should your poultry be infected with the vermin, when they come out with their young, fasten round their necks, a woollen string anointed with mercurial ointment; it should be drawn tolerable tight, and placed near the body, or they will scratch it off.

Respectfully,
Your obedient servant,
JOHN A. JONES.

N. B. The woollen string should be fastened round the neck as soon as possible, after they are hatched, lest they become infected, before you have relieved the old one.

PATTERSON, N. J. February 5, 1823.

PORK EXTRAORDINARY.

We are reputably informed, that Mr. John Flood, of this town, recently purchased four of the ten pigs, which, with the sow, obtained the premium in Sussex County the past season.—The weight of the four above mentioned, are stated to be severally.

315
342
413
369
———
1439 lbs.

Age 14 months.

One of the ten having been hurt when young, was killed, and weighed only about two hundred weight, the remaining nine (one of which weighed 469 lbs.) with the sow, are said to have weighed between 37 and 38 hundred weight—altogether, this whole family of eleven, exceed two tons in weight.

We have not the name of the gentleman who received the premium in Sussex, but we wish him success in his enterprize.—*Chronicle.*

WILD-GARLIC—CAN IT BE ADVANTAGEOUSLY CULTIVATED?

Adams County, Pa. January 6, 1823.

J. S. SKINNER, ESQ.

Sir—I have observed in No. 41, of this Vol. your liberality in making inquiry respecting the best method of Cultivating the *Crab Grass*; which has encouraged me to make a similar request—one, that in my opinion, is of no less importance.

I have been told that the *Wild Garlic*, has many valuable qualities, which make the cultivation of it very desirable for early pasture, and to afford a richness or high flavour to milk and butter, that cannot be obtained from any other plant. I have not seen any of this valuable plant cultivated, either in drill or broad cast—therefore any information respecting its cultivation, would be thankfully received from your numerous correspondents.

Your's Respectfully,
JOHN BOULSTER.

NEW JERSEY AGAINST THE GREAT RIVAL STATES OF NEW-YORK AND VIRGINIA.

Bridgetown, January 13th, 1823.

A Jerseyman offers to bet that he will kill a hog, on or before the 12th day of March next, the age whereof will then be 1 year and 9 months, which will weigh more than any hog of the same age, killed in either of the States of New York, or Virginia, any time between the 1st day of December last, and the first day of April next—satisfactory evidence will be given, and required, of the age of the hog, when killed, and its weight when cleaned. The money to be placed in the hands of John S. Skinner, on or before the 20th day of February next, with whom the preliminaries may be adjusted, and by whom the bet shall be decided.

PUBLISHED BY ORDER OF THE STATE.

A report of the Tobacco Inspected at and delivered from Piscattaway Inspection Warehouse, during the quarter commencing on the first day of November, eighteen hundred and twenty-two, ending the sixth day of January, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Reinspected.	Total.
Number inspected.	47		1	hhds. 48
Number delivered.	174			174

JOHN C. MOORE, Inspt.

TREASURY OFFICE, ANNAPOLIS, FEBRUARY 3d, 1823.

True copy from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

Kingston, Tennessee, 14th Jan. 1823.

JOHN S. SKINNER, ESQ.

Sir—In the Farmer of the 27th December, last, I see an account of a machine to cut the fur off of skins, without injuring the hide, I wish much to hear more about it; its cost, for one thing, and if it is getting in general use. An answer to this from its inventor, will much oblige

SAMUEL MARTIN.

THE FARMER.

BALTIMORE, FRIDAY, FEBRUARY 14, 1823.

IMPORTANT TO COTTON PLANTERS.

We are happy to have it in our power to state, that Jas. A. Buchanan, Esq. of this city, has imported, through the medium of our worthy Consul at the Isle of France, Martin Bickham, Esq. a bag of cotton seed, specially picked and prepared for the purpose, by a planter of high standing, in that colony, who has kindly furnished some interesting remarks upon the most approved plan of cultivating it. We understand this seed is deposited at the store of the Warren Factory, No. 3, Hanover-street, where all applications either by letter or otherwise, for small quantities, will be gratuitously attended to whilst it lasts. We hope the distribution of this truly valuable seed, will be judiciously made by Mr. Buchanan, for it is well known, that the cotton of the Isle of France is superior to any in the world, with the exception of our very best long staple Sea Islands. It behoves our most active planters to follow up this attempt to introduce a new description of cotton into our country, and we entertain the most sanguine hopes, that the issue of these exertions may realize the expectations of the gentleman with whom they originated. We shall of course expect all those who may receive any of this seed, with a view to make trial of it, to give us, from time to time an account of their progress.

CULTIVATION OF COTTON AT THE MAURITIUS.

It is planted here in the months of November and December, (our spring,) and the trees last three or four years; after the first year they are cut off nearly even with the earth, and they shoot up again to nearly their usual height, when it is necessary to turn off their tops, and keep them at the height of about four feet and a half. They are planted in rich ground at 7 and 8 feet distance, one from the other; and in poor ground, at about 5 feet distance, only two plants are left in the same hole, and the seeds are planted about one inch under ground; it is necessary to keep the field very clean, and clear of weeds, and let the cotton be perfectly dry before it is collected: the plants ought to be hoed, and their roots, well covered when young. After the cotton is collected, it is passed through a mill, and cleaned by means of cylinders, after which it is picked by hand, and freed of all dirt, and impurities, then sent to the press to be embaled.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $7 25—Howard st. Superfine, $6 87½—Wharf, do. 6 12½—Wheat, white, $1 35 to 1 40—Red do., $1 30 to 1 32—Rye, 71 to 75 cents—Corn, 58 to 60 cts.—Oats, 35 to 37½ cents—Beef, live cattle, $5 to $5 50 per cwt.—Beef, 8 cents per lb.—Bacon, round, 10 to 11 cts.—Pork $4 50 to 5 50 per c lb. 6 to 8 cts. per lb.—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $8—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $5—Millet, $2—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons, 32 to 34 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, none in market—Herrings, No. 1, $3 62½ per bbl.—No. 2, $3 37½—Fine salt 80 to 90 cts. per bush.—Coarse, do. 75—Butter, 20 to 25 per lb.—Eggs, 25 cts. per doz.—Turkeys, 75 cts. to $1—Geese, 37½ to 50 cts. Chickens, $2 per doz.—Straw, $10 per ton—Hay, $16 to 17.

MARYLAND TOBACCO—Five hhds. of the new crop has been to market—4 hhds. from Mr. John Mercer, sold for $12 25 cts.—2 hhds. second $6—2 hhds. from Frederick $18.

AGENTS FOR THE AMERICAN FARMER.

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THE AMERICAN GARDENER

CHAPTER IV.

Vegetables and Herbs.

271. TURNIP.—It is useless to attempt to raise them by sowing in the spring; they are never good till the fall.—The sorts of Turnips are numerous, but, for a *garden*, it is quite sufficient to notice *three*; the *early white*, *the flat yellow*, and the *Swedish*, or *Rutabaga*, which last is a very different plant indeed from the other two.—The two former sorts should be sown about the end of July, in rows (in a garden) two feet apart, and thinned out to a foot distance in the rows. Good and deep hoeing and one digging should take place during their growth; for, a large turnip of the same age is better, weight for weight, than a small one, just as the largest apples, or peaches, growing upon the same tree, are better than the small ones growing on it the same year.—The *Swedish* turnip, so generally preferred for table use here, and so seldom used for the table in England, ought to be sown *early in June*, in rows at a foot apart and thinned to three inches in the rows. About the middle of July they ought to be transplanted upon ridges three feet apart (in a *garden*), and during their growth, ought to be kept clean, and to be dug between twice at least, as deep as a good spade can be made to go.—As to the preserving of turnips during the winter, follow precisely the directions given for the preserving of *Beets*, See *Beet*.—But the Swedish Turnip is of further use as producing most excellent *greens* in the spring, and at a very early season. To draw this benefit from them the best way is, to leave a row or two in the ground, and when the winter is about to *set in*, cover them all over with straw or cedar boughs. Take these off when the winter breaks up, and you will have very early and most excellent greens; and when you have done with the greens, the Turnips are very good to eat.

272. WORMWOOD is a herb purely medicinal. It may be propagated from seed, from slips, or from offsets. It ought not to occupy a space of more than a foot square. It must be dried and put by in bags for winter use.

CHAPTER V.

FRUITS.

Propagation, Planting, Cultivation.

PROPAGATION.

273. All the fruits to be treated of here, except the *Strawberry*, are the produce of *trees*, or of *woody plants*. All these may be propagated from *seed*, and some are so propagated. But others are usually propagated by *cuttings*, *slips*, *layers*, or *suckers*; or by *budding* or *grafting* upon *stocks*.

274. The methods of propagation, best suited to each kind, will be mentioned under the *name* of the kinds respectively; and therefore, in this place I am to describe the several methods generally, and the management suited to each.

275. When the propagation is from *seed*, the sowing should be in *good ground*, finely broken, and the seed should by no means be sown too thick. How to save and preserve the seed will be spoken of under the names of the several trees. But the seed being *good*, it should be well sown, well covered, and carefully preserved from mice and other vermin.

276. CUTTINGS are short pieces, cut in the spring, from shoots of the *last year*, and it is, in most cases, best, if they have a joint or two of the *former year's wood* at the bottom of them. The *cutting* should have altogether, about six joints, or buds; and three of these should be under ground when planted. The cuts should be performed with a *sharp knife*, so that there may be nothing ragged or bruised about either wood or bark. The time for taking off cuttings is that of the breaking up of the frost. They should be planted in a *shady place*, and watered with rain water, in dry weather, until they have got shoots several inches long. When they have such shoots they have *roots*, and when they have these, no more watering is necessary. Besides these occasional waterings, the ground should, especially in hot countries, be covered with leaves of trees, or muck, or something that will keep the ground cool during the hot and dry weather.

277. SLIPS differ from cuttings in this, that the former are not *cut*, but *pulled*, from the tree. You take a shoot of the *last year*, and pull it downwards, and thus slip it off. You trim the ragged back off; then shorten the shoot so that it have six joints left; and then plant it and manage it in the same manner as directed for cuttings. The season for the work is also the same.

278. LAYERS.—You take a limb, or branch of a tree, in the fall, or early in the Spring, and pull it down in such a way as to cause its top, or small shoots and twigs to lie upon the ground. Then *fasten* the limb down by a peg or two, so that its own force will not raise it up. Then prune off all the small branches and shoots that stick upright; and, having a parcel of shoots lying horizontally, *lay* earth upon the whole, all along upon the limb from the point where it begins to touch the ground, and also upon all the *bottoms of all the shoots*. Then cut the shoots off at the points, leaving only two or three joints or buds beyond the earth. The earth laid on, should be *good*, and the ground should be fresh-digged and made very fine and smooth before the branches be laid upon it. The earth, laid on, should be from six inches to a foot thick. If the limb, or mother branch, be very *stubborn*, a little cut on the lower side of it will make it the more easy to be held down. The ground should be kept clean from weeds, and as *cool* as possible in hot weather. Perhaps rocks or stones (not large) are the best and coolest covering. These layers will be ready to take up and plant out as trees after they have been laid *a year*.

279. SUCKERS are, in general, but poor things, whether in the forest, or in the fruit garden. They are shoots that come up *from the roots*, at a distance from the stem of the tree, or, at least, they do not come out of that stem. They run to wood and to suckers more than trees do that are raised in any other way. Fruit trees raised from suckers do not bear so abundantly, and such good fruit, as trees raised from cuttings, slips or layers. A sucker is, in fact, a little tree with more or less of root to it, and is, of course, to be treated as a *tree*.

280. BUDDING.—To have fruit trees by this method, or by that of *grafting*, you must first have *stocks*; that is to say, a young tree to bud or graft upon. What are the sorts of stocks proper for the sorts of fruit-trees respectively will be mentioned under the names of the latter. The stock is a *young tree* of some sort or other, and the *bud* is put into the bark on the side of this young tree during the summer; and not before the bud be full and plump. The work may generally be done all through the months of July and August, and, perhaps, later.

281. GRAFTING is the joining of a cutting of one to another tree in such a way as that the tree, on which the cutting is placed, sends up its sap into the cutting, and makes it grow and become a tree. Now, as to the way, in which this, and the way in which *budding*, is *done*, they cannot, upon any principle consistent with common sense, become matter of *written* description. Each is a mechanical operation, embracing numerous movements of the arms, hands, and fingers, and is no more to be taught by written directions than the making of a chest of drawers is. To *read* a full and minute account of the *act*, of budding and grafting would require ten times the space of time that it requires to go to a neighbour's and learn, from a *sight* of the operations that which, after all, no written directions would ever teach. To bud and graft, in all the various modes, form a much nicer and more complicated operation than that of *making a shoe*; and I defy any human being to describe adequately all the several acts in the making of a shoe, in less than two volumes each larger than this. The season for *taking off the cuttings* for grafts, is any time betwen Christmas and March. Any time after the sap is completely in a quiescent state and before it be again in motion. When cut off they will keep *several months*. I cut some *here* in January last (1819). They reached England in *March*; and, I hear that they were growing well in June. A great deal has been said about the *season for grafting*, and Mr. Marshall tells the English, that it must not be done till the sap in the stock is *just ready to flow freely*. He had never seen an American Negro-man sitting by a hot six-plated stove, grafting apple-trees, in the month of January, and then putting them away in his cave, to be brought out and planted in April! I have seen this; and my opinion is, that the work may be done at any time between October and May; nay, I am not sure, that it may not be done all the summer long. The cuttings, too, may be taken off, and put on directly; and the sooner the better; but, in the winter months, they will keep good off the tree for several months.

282. STOCKS must be of different ages and sizes in different cases; and even the propagation of the stocks themselves is not to be overlooked. Stocks are formed out of *suckers*, or raised from the *seed*; and the latter is by far the best; for suckers produce suckers, and do not grow to a handsome stem, or trunk. *Crabs* are generally the stocks for Apple-grafts, and *Plums* for Pears, Peaches, Nectarines, and Apricots. However, we shall speak of the *sorts of Stocks*, suitable to each sort of fruit-tree by and by: at present we have to speak of the *raising of Stocks*. If the stocks be to be of crabs or apples, the seeds of these should be collected in the fall when the fruit is ripe. They are generally got out by mashing the crabs or apples. When the seeds are collected, put them immediately into fine earth; or sow them at once. It may not, however, be convenient to sow them at once: and perhaps, the best way is to sow very early in the spring. If the Stocks be to be of *stone* fruit, the stones, as of cherries, plums peaches and others, must be got when the fruit is ripe. The best way is to put them into fine earth, and keep them there till spring. The earth may be placed in a cellar; or put into a barrel; or a little pit may be made in the ground, and it may be placed there. When the winter breaks up, dig a piece of ground *deep* and make it *rich*; make it very fine; form it into beds, three feet wide; draw drills across it at 8 inches distance; make them from two to three inches deep; put in the seeds pretty thick (for they cost little); cover them completely; tread the earth down upon them; and then smooth the surface. When the plants come up, thin them to about three inches apart; and keep the ground between them perfectly clean during the summer. Hoe frequently; but *not deep near the plants*; for, we are speaking of *trees* here; and trees do not renew their roots quickly as a cabbage, or a turnip does. These young trees should be kept during the first summer, as *moist* as possible, without watering; and the way to keep them as moist as possible is to keep the ground perfectly clean

and to hoe it frequently. I cannot help observing here upon an observation of Mr. MARSHALL: "as to "*weeding*," says he, "though seedling "trees must not be *smothered*, yet some *small* "*weeds* may be suffered to grow in summer, as "they help to *shade* the plants and to keep the "ground *cool*." Mercy on this Gentleman's readers! Mr. Marshall had not read TULL; if he had, he never would have written this very erroneous sentence. It is the *root* of the weed that does the mischief. Let there be a rod of ground well set with even "*small weeds*," and another rod *kept weeded*. Let them adjoin each other. Go, after 15 or 20 days of dry weather; examine the two; and you will find the weedless ground moist and fresh, while the other is as dry as dust to a foot deep. The root of the weed sucks up every particle of moisture. What pretty things they are, then, to keep seedling trees *cool*!—To proceed: these seedlings if well managed, will be eight inches high, and some higher, at the end of the first summer. The next spring they should be taken up; or this may be done in the fall. They should be planted in rows, four feet apart, to give room to turn about amongst them; and at two feet apart in the rows. if intended to be grafted or budded without being again removed. If intended to be again removed, before grafting or budding, they may be put at a foot apart. They should be kept clean by hoeing between them, and the ground between them should be *dug in the fall*, but not at any other season of the year.—The plants will grow fast or slowly according to the soil and management; and he who knows how to bud or to graft, will know when the stock is arrived at the proper size for each purpose.—To speak of the *kind* of stocks most suitable to the different kinds of fruit-trees is reserved till we come to speak of the trees themselves; but there are some remarks to be made here, which have a *general application*, relative to the kinds of stocks.—It is supposed by some persons, that the nature of the stock affects the nature of the *fruit*; that is to say, that the fruit growing on branches, proceeding from a *bud* or a *graft*, partakes more or less of the flavour of *the fruit which would have grown on the stock*, if the stock had been suffered to grow to a tree and to bear fruit. This is Mr. MARSHALL's notion. But, how erroneous it is, must be manifest to every one when he reflects that the stock for the *pear tree* is frequently the *white-thorn*. Can a pear partake of the nature of the *haw*, which grows upon the thorn, and which is a *stone-fruit* too? If this notion were correct, there could be hardly a single apple-orchard in all England: for, they graft upon *crab-stocks*; and, of course, all the apples, in the course of years, would become crabs. Apricots and Peaches are, in England, *always* put on plum-stocks; yet, after centuries of this practice, they do not become plums. If the *fruit* of the graft partake of the nature of the stock, why not the *wood* and *leaves*? Yet, is it not visible to all eyes, that neither ever does so partake;—This, then, like the carrying off the farina from the *male* to the *female* flower is a mere whim, or dream. The bud, or graft, retains its own nature, wholly unchanged by the stock; and, all that is of consequence, as to the kind of stock, is, whether it be such as will *last long* and supply the tree with a *suitable quantity of wood*. This is a matter of great importance; for though *peach will grow on peach*, and *apple* on *apple*, the trees are not nearly so vigorous and durable as if the peach were put on the *plum* and the apple on the *crab*. In 1800, I sent several trees from England to Messrs. James and Thomas Paul, at Busleton, in Pennsylvania. There was a *Nectarine* amongst these. It is well known, that, in 1817, there had been so great a mortality in the peach orchards, that they had become almost wholly extinct. At Busleton there had been as great a mortality as in any other part. Yet I, that year, saw the *Nectarine tree* large, *sound in every part*, fine and *flourishing*. It is very well known, that the peach trees here are very *short-lived*. Six, seven or eight years, seem to be the duration of their life. This *Nectarine* had stood *seventeen years*, and was likely to stand twice as long yet to come. It is now growing in the garden of the late Mr. James Paul, in Lower Dublin Township; and there any one may see it.—It is clear to me, therefore, that the short life of the peach-orchards is owing to the *stock being peach*. No small part of the peach-trees are raised *from the stone*. Nothing is more frequent than to see a farmer, or his wife, when he or she has eaten a good peach, to go and make a little hole and *put the stone in the ground*, in order to have *a peach tree of the same sort*! Not considering, that the stone never, except by *mere accident*, produces fruit of the same quality as that within which it was contained, any more than the seed of a carnation produces flowers like those from which they proceeded.—The peaches in America are, when budded, put on *peach-stocks*; and this, I think, is the cause of their *swift decay*. They should be put on *plum-stocks*; for, to what other cause are we to ascribe the long life and vigorous state of the Nectarine at Mr. Paul's? The plum is a *closer* and *harder* wood than the peach. The peach-trees are destroyed by a *worm*, or, rather, a sort of *maggot*, that eats into *the bark at the stem*. The insects do not like the plum bark; and, besides, the plum is a more *hardy* and *vigorous* tree than the peach, and, observe, it is frequently, and most frequently, the feebleness, or sickliness, of the tree that *creates the insects*, and not the insects that create the feebleness and sickliness. There are thousands of peach trees in England and France that are *fifty years old*, and that are still in vigorous fruitfulness. There is a good deal in *climate*, to be sure; but, I am convinced, that there is a great deal in the *stock*.—Before I quit the subject of stocks, let me beg the reader never, if he can avoid it, to make use of *suckers*, particularly for an *apple or pear-orchard*, which almost necessarily is to become pasture. Stocks formed out of *suckers* produce *suckers*; and, if the ground remain in grass for a few years, there will arise a *young wood* all over the ground; and this wood, if not torn up by the plough, will, in a short time, *destroy the trees*, and will in still less time, deprive them of their fruitfulness. Besides this, suckers, being originally *excrecences*, and *unnaturally vigorous*, make wood *too fast*, make *too much wood*; and, where this is the case, the fruit is scanty in quantity. "Haste "makes waste" in most cases; but, perhaps, in nothing so much as in the use of suckers as stocks. By waiting a year longer and bestowing a little care, you obtain seedling stocks; and, really, if a man has not the trifling portion of patience and industry that is here required, he is unworthy of the good fruit and the abundant crops, which, with proper management, are sure, in this country, to be the reward of his pains. Look at England, in the spring! There you see fruit trees of all sorts *covered with bloom*; and from all of it there sometimes comes, at last, not a single fruit. Here, in this favoured country, to count the blossoms is to count the fruit! The way to show our gratitude to God for such a blessing, is, to act well *our* part in turning the blessings to the best account.

PLANTING.

283. I am not to speak here of the situation for planting, of the aspect, of the nature of the soil, of the preparation of the soil; for these have all been described in CHAPTER I, Paragraph 20, save and except, that, for trees, the ground should be prepared as directed for *Asparagus*, which see in its Alphabetical place, in Chapter IV.

284. Before the reader proceed further, he should read very attentively what is said of *transplanting generally*, in Chapter III, paragraph 109 and onwards. He will there perceive the absolute necessity of the ground, to be planted in, being made perfectly *fine*, and that no clods, great or small, ought to be tumbled in about the roots. This is so capital a point, that I must request the reader to pay particular attention to it. To remove a *tree*, though young, is an operation that puts the vegetative faculties to a severe test; and, therefore, every thing should be done to render the shock as little injurious as possible.

285. The tree to be planted should be *as young* as circumstances will allow. The *season* is just when the *leaves become yellow*, or, as *early as possible in the spring*. The ground being prepared, and the tree taken up, prune the roots with a sharp knife so as to leave none more than about a foot long; and, if any have been torn off nearer to the stem, prune the part, so that no *bruizes* or *ragged parts* remain. Cut off *all the fibres* close to the roots; for, they never live, and they *mould*, and do great injury. If cut off, their place is supplied by other fibres more quickly. Dig the hole to plant in three times as wide, and six inches deeper, than the roots actually need as mere room. And now, besides the fine earth generally, have some good mould *sifted*. Lay some of this six inches deep at the bottom of the hole. Place the roots upon this in their natural order, and hold the tree perfectly upright, while you put more sifted earth on the roots. Sway the tree backward and forward a little, and give it a gentle lift and shake, so that the fine earth may find its way amongst the roots and leave not the smallest cavity. Every root should be closely touched by the earth in every part. When you have covered all the roots with the sifted earth, and have seen that your tree stands just *as high* with regard to the level of the ground as it did in the place where it before stood, allowing about 3 inches for sinking, fill up the rest of the hole with the common earth of the plat, and when you have about half filled it, *tread* the earth that you put in, but not very hard. Put on the rest of the earth, and leave the surface perfectly smooth. Do not *water* by any means. Water, poured on, in this case, sinks rapidly down, and makes cavities amongst the roots. Lets in air. Mould and canker follow; and great injury is done.

286. If the tree be planted in the fall, as soon as the leaf begins to be *yellow*; that is to say, in October early, it will have struck out new roots to the length of some inches before the winter sets in. And this is certainly the best time for doing the business. But, mind, the roots should be *out of ground* as short a time as possible; and should by no means be permitted to get *dry*, if you can avoid it; for, though some trees will *live* after having been a long while out of ground, the shorter the time out of ground the sooner the roots strike; and, if the roots should get dry before planting, they ought to be soaked in water, rain or pond, for half a day before the tree be planted.

287. If the tree be for an orchard it must be five or six feet high, unless cattle are to be kept out for two or three years And, in this case, the head of the tree must be pruned short, to prevent it from swaying about from the force of the wind. Even when pruned, it will be exposed to be loosened by this cause, and must be kept steady by a stake; but it must not be fastened to a stake, until rain has come to *settle the ground*; for, such

fastening would prevent it from *siuking with the earth*. The earth would sink from it, and leave cavities about the roots.

288. When the trees are *short*, they will require no stakes. They may be planted the second year after budding, and the first after grafting; and these are the best times. If planted in the fall, the tree should be shortened very early in the spring, and in such a way as to answer the ends to be pointed out more particularly when we come to speak of pruning.

289. If you plant *in the spring*, it should be as early as the ground will bear moving; only, bear in mind, that the ground must always be *dry at top* when you plant. In this case, the new roots will strike out almost immediately; and as soon as the buds begin to *swell*, shorten the head of the tree. After a spring-planting it may be necessary to guard against *drought;* and the best protection is the laying of small stones of any sort round the tree, so as to cover the area of a circle of three feet in diameter, of which circle the stem of the tree is the centre. This will keep the ground *cooler* than any thing else that you can put upon it.

290. As to the *distances, at which trees ought* to be planted, that must depend on the sort of tree, and on other circumstances. It will be seen by looking at the plan of the garden *(Plate* I*)*, that I make provision for 70 trees, and for a row of *grape vines* extending the length of two of the plats. The trees will have a space of 14 feet square each. But, in *orchards*, the distances for apples and pears must be much greater; otherwise the trees will soon run their branches into, and injure, each other.

CULTIVATION.

291. The Cultivation of fruit trees divides itself into two distinct parts; the management of the tree itself, which consists of *pruning* and *tying;* and the management of the ground where the trees grow, which consists of *digging*, *hoeing* and *manuring*. The management of the tree itself differs with the sort of tree; and, therefore, I shall treat of the management of each sort under its own particular name. But the management of the *ground* where trees grow is the same in the case of all the larger trees; and for that reason I shall here give directions concerning it.

292. In the first place, the ground is always to be kept *clear of weeds;* for whatever they take is just so much taken from the fruit, either in quantity, or in quality, or in both. It is true, that very fine orchards have grass covering all the ground beneath the trees; but these orchards would be still *finer* if the ground were kept clear from all plants whatever except the trees. Such a piece of ground is, at once an orchard and a pasture; what is lost one way is, probably, gained the other. But, if we come to fine and choice fruits, there can be nothing that can grow beneath to balance against the injury done to the trees.

293. The roots of trees go *deep;* but the principal part of their *nourishment* comes from the top-soil. The ground should be loose to a good depth, which is the certain cause of constant moisture; but trees draw downwards as well as upwards, and draw more nourishment in the former than in the latter direction. *Vine-yards*, as Tull observes, must always be *tilled*, in some way or other; or they will produce nothing of value. He adds, that Mr. Evelyn says, that “ when “ the soil, wherein fruit trees are planted, is “ constantly kept in tillage, they grow up to an “ Orchard in half the time, they would do, if “ the soil were not tilled.” Therefore, tillage is useful; but, it were better, that there were tillage without under crops; for these crops take away a great part of the strength that the manure and tillage bring.

294. Now, then, as to the trees in my *garden;* they are to be choice peaches, nectarines, apricots, plums, cherries, and grape vines, with a very few apples and pears. The *sorts* will be mentioned hereafter in the Alphabetical list; but, the tillage for all except the *grape-vines*, is the same; and the nature of that exception will be particularly stated under the name of *grape*.

295. It was obsreved before, that the ground is always to be kept *clear of weeds.* From the spring to the fall *frequent hoeing* all the ground over, not only to keep away weeds but to keep the ground moist in hot and dry weather, taking care never to hoe but when the ground is *dry at pot.* This hoeing should not go deeper than four or five inches; for there is a great difference between *trees* and *herbaceous plants* as to the *renewal of their roots* respectively. Cut off the lateral roots of a cabbage, or a turnip, of a wheat or a rye or an Indian-corn plant, and new roots, from the parts that remain, come out in 12 hours, and the operation, by multiplying the mouths of the feeders of the plant, gives it additional force. But, the roots of a tree consist of *wood*, more or less *hard:* they do not quickly renew themselves: they are of a permanent nature: and they must not be much mutilated during the time that the sap is in the flow.

296. Therefore, the ploughing between trees or the digging between trees ought to take place only *in the fall*, which gives time for a renewal, or new supply, of roots before the sap be again in motion. For this reason, if crops be grown under trees in orchards, they should be of wheat, rye, winter-barley, or of something that does not demand a ploughing of the ground in the spring. In the garden, dig the ground well and clean, *with a fork*, late in November. Go close to the stems of the trees; but do not bruize the large roots. Clean and clear all well close round the stem. Make the ground smooth just there. Ascertain whether there be *insects* there of any sort. And, if there be, take care to destroy them. Pull, or scrape, off all rough bark at the bottom of the stem. If you even *peel off the outside bark* a foot or two up, in case there be insects, it will be the better. Wash the stems with water, in which *tobacco* has been soaked; and do this, whether you find insects or not. Put the tobacco into hot water, and let it soak 24 hours, before you use the water. This will destroy, or drive away, all insects.

297. But, though, for the purpose of removing all harbour for insects yon make the ground smooth just round the stem of the tree, let the rest of the ground lay as rough as you can; for the rougher it lies the more will it be broken by the frost, which is a great enricher of all land. When the spring comes, and the ground is dry at the top, give the whole of the ground a good deep hoeing. which will make it level and smooth enough. Then go on again hoeing throughout the summer, and watching well all attempts of insects on the stems and bark of the trees.

298. *Diseases* of trees are various in their kind; but, nine times out of ten they proceed from the *root.* Insects are much more frequently an *effect* than a *cause.* If the disease proceed from *blight*, there is no prevention, except that which is suggested by the fact, that feeble and sickly trees are frequently blighted when healthy ones are not; but, when the insects come, they add greatly to the evil. They are generally produced by the disease, as maggots are by putrefaction. The *ants* are the only active insect for which there is not a cure; and I know of no means of destroying them, but finding out their nests and pouring boiling water on them. A line dipped in *tar* tied round the stem, will keep them from climbing the tree; but they are still alive. As to the diminutive creatures that appear as *specks in the bark;* the best, and perhaps, the only remedy against the species of disease of which they are the symptom, consists of good plants, good planting and good tillage. When orchards are seized with diseases that pervade the whole of the trees, or nearly the whole, the best way is to cut them down: they are more plague than profit, and, as long as they exist, they are a source of nothing but constantly-returning disappointment and mortification. However, as there are persons who have a delight in quackery, who are never so happy as when they have some specific to apply, and to whom rosy cheeks and ruby lips are almost an eye-sore, it is perhaps, fortunate, that the vegetable world presents them with patients; and thus, even in the cotton-blight or canker, we see an evil, which we may be led to hope is not altogether unaccompanied with good.

(To be Continued.)

FROM THE NATIONAL GAZETTE.

Messrs. Editors,

A paragraph in your Gazette of Saturday, on the subject of Bees, induces me to mention, that an easier method of gathering the honey than in India, and a more merciful one than what is generally pursued in this country, is practised in Germany.—There, this interesting little insect is cultivated to great extent, frequently as an amusement, and very commonly as a source of revenue. Many treatises have been written on their singular nature, domestic arrangements and the best mode of treating them. Perhaps I put some of your readers in mind of the renowned Baron Munchausen, when I state that in some parts of Germany they are regularly taken to pasture! yet such is the fact. I have seen on the great heath of Luneburg in the Hanoverian dominions, hundreds of Hives that were carried there from distant places in the spring of the year, for the bees to pasture on the heath flowers; herdsmen attend them; and in the autumn they are taken home again.

The mode of securing the honey is this, early in the fall the Bee-father (as the person who cultivates Bees is called) protects himself with gloves and a kind of cap long enough to hang over his neck and shoulders, and which has a wire mask—and in dark rainy weather, or early in the morning or late in the evening, when all the Bees are at home, he turns the hives upside down—a match made of dry herbs, such as rue wrapped in tow and linen, which burns without flame and makes a great smoke, is lighted and the smoke blown upon the hive, which drives the bees to the lower part of the hive, and gives him an opportunity of taking what quantity of honey he thinks they can spare, leaving a sufficiency for winter provision. Should it happen that the Bee-father takes too large a tribute, or that an early winter prevents the Bees from replenishing their stock as expected—they then are regularly fed with a composition consisting of sugar, honey wine and water, boiled together, which is put in a saucer under the hive.

Your's, A GERMAN.

TOBACCO OF UPPER CANADA.

A letter from Amherstburgh, Upper Canada, published in the Quebec Gazette, says—“There has been some stir this winter in consequence of the Tobacco trade. Next spring I think there will not be less than *one hundred hogsheads* shipped from hence. The Lower Canada Merchants will soon have to find us other Markets than Montreal and Quebec, for the quantity will increase at least *ten fold* the year after.

DISEASES OF WHEAT.

The following notice of the singular diseased appearance of wheat, on the fields near York in Virginia, was furnished by a very respectable and esteemed correspondent—and we beg leave to refer him, and our readers, to the full, and interesting remarks of many careful observers, recorded in our former volumes—to be satisfied of the peculiarities of the disease which he describes, and the difference between those and the usual ravages of the Hessian Fly. *Edit. Am. Far.*

York, *Va.*, 1*st December*, 1822.

Dear Sir,

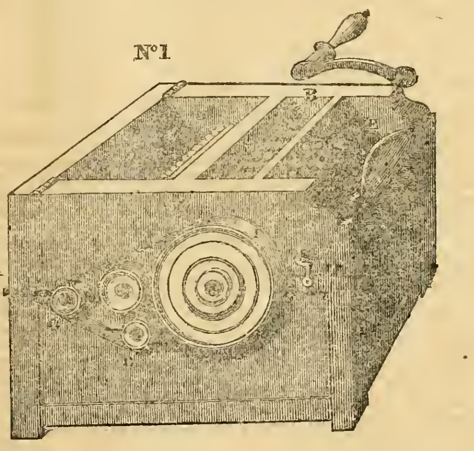
I have never known so mild a November as the past; I have now green peas, in full bloom, in my garden, and shall gather some to-morrow or next day. Our forward wheat crops were very promising, until within a few days; they are now decaying; and, it is thought, the Hessian Fly has made its appearance with us. Can you inform me if the Fly attacks the roots of the wheat? I have been this day partly engaged in examining some bunches taken from my wheat field, which was seeded the first of October; the blades are turning yellow, generally beginning at the points, and advancing to the stalk; the roots on one side, are totally destroyed, and present a hard fibrous substance, abortively attempting to put forth new roots. I have discovered neither on the leaf, nor stalk, nor roots, any thing like an insect, or its eggs, though I use an excellent magnifying glass. The external leaf of each shoot decays first. I have marked several bunches and roots, but can make no discovery of the insect; can this be the fly—does it feed under the surface of the earth, and upon the roots of the vegetable? are such the appearances of the plant, when assailed by the fly? At a distance, the wheat looks well and healthy; it is only when you visit the field, that its decay is seen at present. I was, until recently, a sceptic as to the existence of the fly, in this part of the state; all my neighbours differing with me. If not the fly, it is an insect, or a disease of the plant, which is producing the same effects, as the fly; and I learn that some of our farmers, are preparing to plough up their wheat to re-sow. I never experienced any thing like the present appearance of my crop, and that too, upon land in fine heart, under good tilth, manured formerly with kelp, and which produced a heavy crop of Indian Corn. Your's respectfully,

T. G******.

COTTON GINS

A short description of the machine invented by Eli Whitney, for Ginning Cotton, politely sent to us, from the United States' Patent Office, by Wm. Thornton Esq.

N°1



N°2

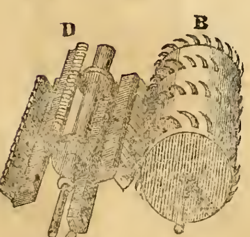
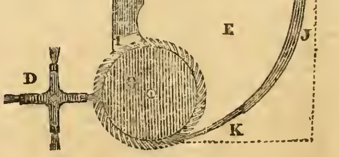


Fig 3



The principal parts of this machine, are, 1st, the frame; 2d. the cylinder; 3d, the breastwork; 4th, the clearer; and 5th, the hopper.

1st. (A.) The frame by which the whole work is supported and kept together, is of a square or parallelogramic form, and proportioned to the other parts, as may be most convenient.

2d. (B.) The cylinder is of wood, its form is perfectly described by its name, and its dimensions may be from six to nine inches diameter, and from two to five feet in length. This cylinder is placed horizontally across the frame A, leaving room for the clearer D, on one side, and the hopper E, on the other. In the cylinder is fixed an iron axis, which may pass quite through, or consist only of gudgeons driven into each end.

There are shoulders on this axis, to prevent any horizontal variation, and it extends so far without the frame as to admit a winch at one end, by which it is put in motion, and so far at the other end, as to receive the whirl, by which the clearer is turned. The surface of the cylinder is filled with teeth, set in annular rows, which are at such a distance from each other, as to admit a cotton seed to play freely in the space between them. The space between each tooth in the same row, is so small, as not to admit a seed, nor a half seed to enter it. These teeth are made of stiff iron wire, driven into the wood of the cylinder, the teeth are all inclined in the same way, and in such a manner, that the angle included between the tooth, and a tangent drawn from the point, into which the tooth is driven, will be about 55 or 60 degrees; the gudgeons of the cylinder run in brass boxes, each of which is in two parts, one of which is fixed into the wood of the frame, and the other is confined down upon the axis with screws.

3d. (C.) The breastwork is fixed above the cylinder, parallel and contiguous to the same. It has transverse grooves or openings through which the rows of teeth pass as the cylinder revolves, and its use is to obstruct the seeds while the cotton is carried forward, through the grooves, by the teeth. The thickness of the breastwork is two and a half, or three inches, and the under side of it I, is made of iron or brass.

4th. (D.) The clearer is placed horizontal with, and parallel to the cylinder. Its length is the same as that of the cylinder, and its diameter is proportioned by convenience. There are two or four brushes or rows of bristles, fixed in the surface of the cleaver, in such a manner, that the ends of the bristles will sweep the surface of the cylinder. Its axis and boxes, are similar to those of the cylinder. It is turned by means of a band F, and whirls;—it moves in a contrary direction from the cylinder, that puts it in motion, by means of the two small whirls G G, whose axis are pivots made fast in the frame, and it so far outruns, as to sweep the cotton from the teeth, as fast as it is carried through the breastwork.—The periphery of the whirls is spherical, and the band a broad strap of leather. And at H, there is a groove to permit the wheel G, to recede from the other, to tighten the band by a screw at the end under A.

5th. One side of the hopper E, is formed by the breastwork C, the two ends by the frame, and the other side J, is moveable from, and towards the breastwork, so as to make the hopper more or less capacious.

The cotton is put into the hopper, carried through the breastwork by the teeth, brushed off from the teeth by the clearer, and flies off from the clearer, with the assistance of the air, by its own centrifugal force. The machine is turned by water, horses, or in any way, most convenient.

There are several modes of making the various parts of this machine, which together with their particular shape, and formation, are pointed out and explained in a description with drawings; attested as the Patent Laws direct, and lodged in the office of the secretary of state.

A sectional side view of parts of the machine, is given in Fig. 3, above, wherein

B, represents the cylinder, with rows of iron or other metal teeth, which pass through I, the brazen or lower part of C, the breastwork, which keeps the seed from passing through the machine with the cotton.

D, represents the clearer, with bristles in it, to brush the cotton from the metal teeth, as the cylinder turns round. E, the hopper which holds the cotton, but permits the disengaged seed to pass through the grating at K.

When we received the following account of improvements made on cotton gins, by Dr. Rush Nutt, near Petit Gulph, Mississippi: we applied to Wm. Thornton, Esq. of Washington City, for a description of Whitney's Cotton-Gin, from the Patent Office—that we might place before our readers, a complete view of so important a machine, and enable *all of* them to understand the nature of the reported improvements.

After having carefully examined the foregoing description, *any* one may easily form a correct opinion as to the value of improvements, detailed below. For this account of Dr. Nutt's improvements, we are indebted to J. R. Bedford, Esq. of Alabama, as we formerly mentioned. And we have taken great pleasure in preparing the article for the press, as we indulge the hope, that it may be useful to many persons, and entertaining to every reader.—*Edit. Am. Farmer.*

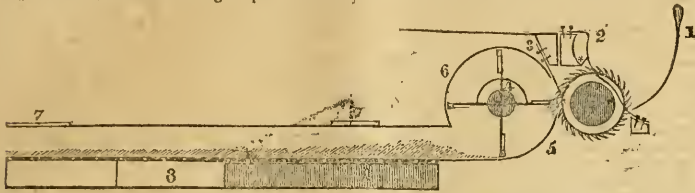


Figure 1. Is the seed board.

Figure 2. Is the grate screwed on at the low-end, as in all gins; but above it continues up, and and forms a curve for the roll, keeping a distance from the wood of two inches; then turning back, it is screwed to the top part of the first cross bar, forming in part the grate fall.

Figure 3. Is a straight grate, designed to detach false seed from the cotton, before it reaches the brush.

Figure 4. Is and end view of the brush, 18 inches in diameter, and has six motions to one of the rag cylinder. The end of the board, which is seen at the extremity of each arm, and has the hair inserted into it, is 3½ inches broad, which will generate more air, than if wider.

Figure 5. Is the under sheeting of the brush, made of plank, forming part of a circle, until it is perpendicular to the brush; then it runs straight off to the screen, which is represented by the dots.

The planking now turns down to form the lower part of the trunk, say four and a half inch s, and then turns and goes forward to form the bottom of the trunk.

Figure 6. Is to shew the upper sheeting beginning as near the rags as possible, and continues round, a true part of a circle, until it gets within five inches of the lower sheeting, on a perpendicular line. It then sets off in a straight line, and forms the upper part of the trunk; making the trunk five inches above the screen, which is four and a half inches above the bottom. It should be remembered, that the upper and lower sheeting of the brush, should not be nearer the hair in the brush, than a quarter of an inch; if it be so near as to touch, it will roll the cotton, and defeat our intentions. Near the mouth, or extremity of the trunk, the upper planking is elevated, which makes the mouth larger; this I have found by experience to be best.* The slight touches of the pen in the trunk, shows the direction the cotton takes, when struck down from the saws.

Figure 7. Shows where the sliding doors should be on the top of the trunk; they can be rabbited in, and slide, presenting a smooth surface within. It is necessary, almost every day to slip these doors, and sweep the screen, as in damp weather, many false seed, dirt and leaf will collect on them; and if not taken away, will be forced into the cotton room.

Figure 8. Is to show the eddies in the trunk below the screen. The screen lays on, and is supported by them. The term eddies I have applied to the cross boards, which form twelve divisions. These partitions break the current of air below the screen; consequently, very little cotton is forced below it, although it affords every opportunity for the dirt, leaf and false seed to go down. These boards should be about a foot and a half, or two feet apart.

Figure 9. Shows a door, covering two eddies.—It is necessary to have doors to all that part of the trunk, under the screen, so that it may be cleaned out occasionally; it is sufficient, for one side of the trunk, to have them; and as I have begun with one door to cover two, so it may be continued; say, six doors to twelve eddies. The side of the trunk, where the doors are to be, need not come lower, than half an inch below the screen, as the doors can close the balance—these should be hung by hinges, and kept in place by a wooden button.

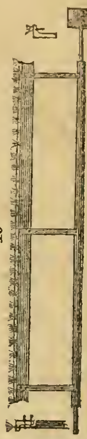
The joints of the doors should be directly opposite every second eddy, so that no air can escape from one eddy to another, and indeed the sheeting around the fan or brush, and the trunk, should be air tight.

This trunk is supposed to be 20 or 24 feet in length. My own is twenty-four feet; but if there was sufficient room, I would have it forty.

The cotton should be blown into a room, apart from the press room, to prevent it from attaching to the screws. At the top of the room, into which the cotton is blown, there should be a garret, and an opening in it, for the air to escape through, as it will carry with it, a great quantity of dirt, and short lint. I have endeavoured to turn the current out of the house by a small trunk put through the wall, but the circulation of the air without, was such, as to keep back the dust, and lint, and soon choak the conductor. This lint and dust should be gut rid of, as it is very injurious to the machinery of factories.

At the sides of the gin stand, there should be air holes of about 12 or 13 inches, cut out of the upper part of the stand, in form of half a cylinder, and opposite the upper half of the brush cylinder, or clearer, as this is the only way that air can be admitted to the brush, with advantage—in this manner, likewise, the greatest quantity of air, will be generated. It is evident, that a brush serving as a fan, should have but four arms, as more or less, would make less air. When the brush or fan, as it may be called, roars loudly, it is an evidence that we have air sufficient. At the end of the brush cylinder, where the pulley will be placed, there should be a box on top of the gudgeon, and also at the bottom, as the band tends to bear it upwards. The boxes should be made of brass, lest they should take fire, as the motion of the brush is very great.

Figure 10. Gives a side view of the brush cylinder, with its pulley at one end, and a set of arms; for one board or flange, 3½ inches wide, with the hair inserted and worked in, like a shoe brush.



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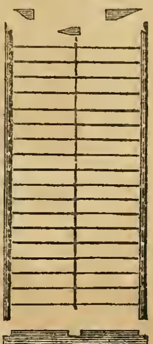
At each end of this board, will be seen representations or end views of the board, to show how it is made, and a hole through the thick part, with a bunch of hair inserted. Another representation also serves to show how the board is let on, and screwed to the arm.

Figure 11. Shows how the screen is made.



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12

One slat at each end of the cross sticks, with holes at equal distances in the slats, to receive the ends of the cross sticks. There is a slat to support the sticks in the middle. This stick should be nailed to this middle slat, to prevent their springing or warping out of a true line; they should be regularly spaced at such distances apart, as to suffer a cotton seed readily to drop through; the sticks should be nearly round, being a little flatted at bottom, and made of a wood that will receive a good polish. My own are made of cherry, and polished with sand paper, they are nearly half an inch in diameter. I have given end views of the side slats; sharp at top, so that when the screen is laid in the trunk, they taper gradually from the sticks, to the sides of the trunk, and no trash can settle on them. The middle slat is rounding on the top edge, for the same purpose; they can be made of plank, one inch thick, and three broad.

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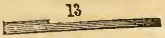
* We have only shown a portion of the trunk, in its length, of course the slight elevation, at the extremity is not seen in our cut.

Edit. Am. Farmer.

Figure 12, in the above cut, gives a side view of the eddy boards, that are to extend crosswise of the trunk, with the niches on top of it, for the lower edges of the slats to drop in. Upon these boards, the screen will rest its whole extent. An end view is also presented of this board, made sharp at top, to prevent trash from settling on it, in passing through the sticks.

Figure 13. Is to give a front view of one bar of a grate, with a niche, at the upper shoulder, to enable us to take out the false seed.

13



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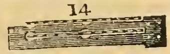
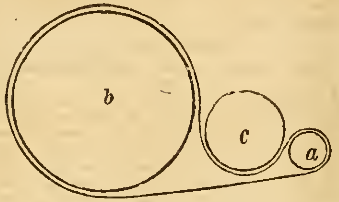
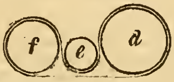


The roll will bring up the tag of cotton attached to the false seed, on the back of the grate, to the turn at Figure 2; then as other tags come on, the preceding ones will be forced on to the niche, when they can either be removed or suffered to drop. If they drop, they will be stopped before they reach the saws, by a piece of leather, that sets off from the wood, in a direction towards the grate, and touches it; the leather will yield to the passage of the false seed, and then fall back to its place; this piece of leather is noticed thus, * in cut numbered one to nine. Were we to have the niche at the top of the roll, where the grate makes a sudden turn back, the false seed would be brought into the roll again; but as the ginner has time to remove a great many, I adpoted the plan to make the place for their removal farther back. I consider this form of a grate, very essential in a point, not yet noticed; which is, that it enables us to gin much faster; for when there is a tag of cotton throwing up the roll just above the saws, preventing them from taking as much cotton along with them, as they would otherwise do, and a wad of false seed under and between the grate, the saws are always robbed, of more or less cotton, in their passage. Where the saws pass the grate, as above, at 14, it will be observed, that the bars of the grate slightly narrow, which will prevent the possibility of the fibres being cut or broken.

It is better for a small seed to escape, than for the fibres to be injured; and as it is almost impossible to keep always from rubbing, I have adopted this plan, and I think with advantage: From the upper end of the grates, to an inch below the point, where the saws pass through, (saving the niche,) they should be very near to each other; then the distance between them should gradually widen, so as to let the dirt, leaf, and small beards fall readily as they get loose. It is a matter of the greatest importance, that every grate, before going to a gin, should be laid with steel; a short, thin piece, can be easily welded on that part of the grate, where the saws pass. When this is done, one set will last longer, than six or eight without it. I have never known a gin to prepare cotton as well the second and third years, as the first; and the reason is very obvious: the corner of the grate, wears a little, and as soon as this is done, small seeds are crushed and carried through. It is folly to say a grate cannot be well bent, when laid with steel; this can be done, and hardened, after being bent.

It is perhaps unnecessary to say much on the score of pullies; their size will depend on the different motions; small pullies should be solid, and large ones have spokes, each should be made of plank, and placed so as to preserve the circle, if the timber should shrink. Tightening pullies should always be large; their axles will heat less, and also enable us to cause the band to embrace more of the pulley that is to be driven. The placing of the pullies depend entirely upon the form of the stand. My gin has on the right end of the rag cylinder, a pulley, *a*, of 11 inches; this, coupled to a drum or big band wheel, *b*, of 8 feet diameter, drives the cylinder, and is tightened by a pulley, *c*, 3 feet diameter: at the other end, or to the left is a pulley, *d*, of 26 inches, which is coupled to the brush pulley, *e*, of a little more than 4 inches diameter, and a tightening pulley *f*, of 20 inches diameter, hung in a sliding frame nearly over the brush pulley, which keeps the band to a necessary degree of tightness by a weight suspended to a sweep, or roller and lever.





CIDER ROYAL AND BARLEY COFFEE.

Vineyard, near George Town,
Feb. 8, 1823.

J. S. Skinner, Esq,

Dear Sir,—I observe in your Farmer of yesterday, a receipt to make Cider Oil, as you call it—I have some doubts that the person who furnished you with the receipt, is ignorant of what it exactly is; as well as of the manner of making it—I have seen it made very often by Germans, and it is by them called cider royal; and by putting sassafras, or any thing else to flavour it, I am certain would injure it; the way I have seen it made as follows:

To make Cider Royal.

Take a clean well hooped cask, and burn a sulphur match in it, and keep the bung close stopped for about two hours; then put in four gallons of good apple or cider brandy; then take four gallons of the cider immediately from the press, and put it to the brandy, shaking the barrel well to absorb the sulphurous gas, (the cider ought to be strained through a flannen,) and then fill the barrel with the cider before any fermentation has taken place, and bung up the barrel tight immediately, and put it in a cool place, and rack it off in March following. If it is not fine when racked, it may be fined with the whites of eggs—and as soon as quite bright, rack it again into a clean cask and it will keep for years. Some persons do not sulphur the cask, under an idea that it produces head-ache; others put but three gallous of brandy, and from ten to twelve pounds of sugar to it. It is, if properly made, and of good cider, a fine vinous beverage, to drink in summer, when diluted with water; and in the German Counties of Pennsylvania, it was the favourite drink, when they got any refreshment at taverns, by all those persons who could not afford to get wine. Those persons that I knew most famous for makng good cider royal, put rye whiskey to it instead of brandy, as it sooner became assimilated to the cider and vinous than brandy,; that is, it was not to be tasted, when brandy, could always be discovered by a nice palate. Brandy put to cider or wine after it is well fermented, never loses its flavour in either cider or wine, and instead of becoming vinous, as it ought to be, by fermentation, it is only branded cider, or what used to be called, some 30 or 40 years ago, *Sampson*; which was one gill of brandy or other spirits, put to a tankard of cider, which always produced head-aches.

You also, in the last Farmer, make mention of the naked Barley—I remember it for at least fifty years, and it was used by the German farmers of a part of York County, Pennsylvania, and Frederick County, Maryland, to make coffee of; and I recollect of hearing it spoken of as infinitely superior to Rye, as to its flavour and salubrity—But I do not recollect of seeing any of it for upwards of thirty years; but formerly I have seen it brought to York Town, Pennsylvania, and Frederick Town, Maryland, for sale by the name of Coffee Barley—The Germans call it "*Coffedgerst.*"

To make Barley Coffee.

Roast it in the manner that common coffee is roasted, then take one portion of coffee to about as much as one third of the quantity you commonly use for one meal; then take three times that quantity of the roasted barley whole (not being ground) and boil it by itself, then strain it through a tin strainer, with smaller holes than a cullinder; put that liquor over the first portion of coffee and make it in the usual manner.

I knew a very respectable Clergyman, who was fond of some of the good things of this world; that for several years, I was acquainted in his family, always used his coffee made in the above manner—and he used it, because he thought it an improvement on foreign coffee.

P. S.—I have called on a German's son, now middle aged, who says he has often assisted his father in making Cider Royal, and he says, that my receipt for making it, is correct. His father was famous for making good cider royal of the best quality. He himself, attempted this last year to make one barrel of it, and it turns out to be as hard as the hardest cider. He spoke to a person who makes good cider, one whom he could depend on, and gave him an extra price: the cider was made early in the morning, and brought to him before 9 o'clock; he immediately drew off some of the cider, and put to it ten pounds of sugar, and four gallons of apple brandy, and bunged it up tight immediately. He attributes the hardness to a fermentation having taken place before the sugar and brandy was put to it, instead of the sugar and brandy being put in the cask first.

FOR THE AMERICAN FARMER.

CELLERY.

Dear Sir,

I have just read the remark in your paper on raising cellery; and set down to give you an account of the arrangement of his plants, when finally planted out, by one of the best regular scientific and practical gardeners I ever knew; his arrangements were such, that I never saw a vacant space in his garden; as one article was marketing, another was coming forward in the same bed.

His method of raising cellery, I give you exactly as I saw it, and noted it down; but you may vary it by making more rows or less, at your own pleasure. His bed or trench was dug by hand, about one foot deep, and five feet wide; well manured with well rotted manure, and then planted with nine rows of cellery, about six inches apart in the rows, and the rows six inches distant, as per enclosed plan*: by this method, a bed fifty feet long and five feet wide, contained nine hundred plants; they took less ground, less manure, and one third only of the necessary covering in winter, that the single rows would; and if watering was necessary, once passing by the side with a watering pot, as on a bed of a single row, sufficed for three rows; so what was sufficient for three hundred plants, in the common way, did here do for nine hundred. I never knew him fail, and I thought, that when so combined, the manure and water had more effect than the lengthway. I saw three beds this year, so managed by his widow, about fifty feet each, with twelve or thirteen rows as fine as any I ever saw.

The manner of earthing them up was to place two planks edgeways across the bed, and between two adjoining rows, and putting the earth between the plants.

With respect I remain,
Your obedient servant,
—— ——.

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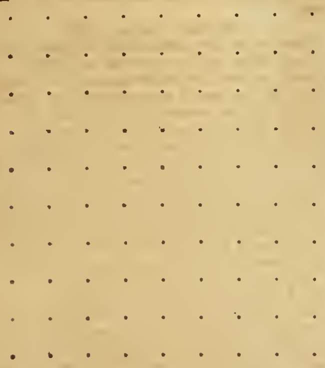

Thus you may extend your bed to any length.

* * *

DRAINING AND RECLAIMING THE VAL DI CHIANA, NEAR CORTONA, IN ITALY.

"The Knights of St. Stephen have conquered a large part of this vale from the river Chiana, which, being subject to floods, had formed here an immense morass. The method which they employed, is called a *Colmata*, and seems to have been known in the Antonine reigns. It consisted here of an enclosure of stupendous dikes, which received the inundations, and confined them for a while on the morass. When the river had fallen, this water was sluiced off into its channel; but, during its stagnation on the surface enclosed, it had left there a deposite of excellent earth; and a succession of such deposites has given solidity to the bog, raised it above the level of ordinary floods, and converted into the richest arable. By this enterprise has the Religion of St. Stephen deservedly become the first proprietor of the plain; while the lands immediately round Cortona count more masters than any Township in Tuscany."

Forsythe's Remarks on Italy, 100.

Note.—After a salt marsh has been completely diked in, and inclosed from the inundations of the tide, according to the method described by *A Chotanter*, in No. 31, Vol. 2, of this paper, it might often during the winter, and in the summer too, when not charged with a crop, have its surface coated over, elevated and fertilized by this Italian *Colmata*. There are few salt marshes so secluded as not to admit of being covered by the muddy streams, from the adjacent hills. The method of pouring on the turbid current, when required, and of preventing its escape for a while through the *tide trunk*, must be so obvious, as to need no explanation. Three or four *Colmata*, during the winter, would add as many inches of ele vation to its surface, besides the additional solidity and fertility.

* * *

TO THE EDITOR OF THE AMERICAN FARMER.

A Virginia Farmer, in No. 47, Vol. 3d. of your paper, asks for information on the best course to be pursued to prevent hogs from being infested with vermin, and how to destroy the vermin after hogs are infested. In answer to this inquiry I will state, for his information, a method which I have practised with success in removing vermin from hogs. It is, to tar them. The operation is performed by taking a small mop, and rubbing the tar on each hog, on different parts of the body.—The lice will leave the hogs and crawl into the straw or leaves where the hogs sleep. These beds should be burnt two or three days after the hogs are tarred—and the tarring should be repeated for a fortnight or three weeks, as often as once a week, so as to destroy the young vermin which will be hatched from the knits on the hogs, at the time of tarring them. The first and perhaps second time, to add a little brimstone to the tar is thought advisable.

Will you or some of your numerous correspondents, inform us of the best method of removing vermin from cattle, sheep, mules and horses—my sheep and cattle are very badly infested with them at this time. They are an insect of not the twentieth part the size of those that infest hogs, but infinitely more numerous, and when a sheep or cow becomes infested by them, it is almost impossible to keep them alive through the winter.

A North Carolina Farmer.

March 12*th*, 1822.

* * *

RUTA BAGA,

CULTIVATED AS A SECOND CROP.

Albany, N. York, 4*th January*, 1823.

Dear Sir,

My improvement in the ruta baga culture consists in growing them as *a second crop*, upon a clover lay. The grass is cut about the 15th or 20th of June. If I have manure, and the scrapings of my yards will always afford me a few loads, I take about a dozen carts full and spread it upon an acre. The ground is then immediately plough ed well, one pound of seed sown broadcast per acre, and harrowed in with a light harrow, lengthwise of the furrow. A single thinning and cleaning with the hoe, is all the further attention I give them, until they are drawn in November. My first experiment gave me a product of six hundred bushels. They should be thinned to a distance of eight or twelve inches; and for this operation a skim hoe of the required width has a decided preference over the common hoe. The stubble and roots of the clover decompose rapidly, afford nutriment and moisture, and render the soil friable and light.

I am, dear sir yours, &c.

John S. Skinner, Esq. J. B***.

PORCELAIN CLAY.

The proprietors of an extensive bed of what competent judges have pronounced to be genuine porcelain clay, are desirous of obtaining some particular information concerning the same. Under the belief, that either the editor of the American Farmer himself, or some of his intelligent correspondents, can furnish the desired information, the following enquiries are respectfully submitted.

Is there at this time, in the United States, a manufactory for converting this kind of clay into wares?

What would be the probable cost of such an establishment—the expenses in carrying it on—and can persons be procured in this country, who understand the business?

Answers to these enquiries, as well as any other information connected with the subject, will be thankfully received. C. F.

Rowan County, (N. C.) 28*th January*, 1823.

* * *

FROM POULSON'S AMERICAN DAILY ADVERTISER.

MODE OF BURNING CLAY FOR MANURE, AND WARMING A HOUSE AT THE SAME TIME, VIZ:

Take a quantity of clay, as many cart loads as is wanted, and make it, with the addition of water, to the same consistence as that used for bricks; only there is no occasion of mixing any loam with it; and for the sake of having the clay in a convient form, a mould may be made the same width as a brick mould, and half the length; then fill this mould half full of the worked clay, and put a handful of spent Tanners' bark or small chips, over the clay, and fill the mould full, so that the clay will be over and under the tan, or chips; and when dry it is fit for the fire; in this way the tan or chips, when the clay is heated red hot, become combined or converted into soot, which makes a fine manure for cold clay lands.—The grates used for burning Lehigh or Schuylkill coal, would be admirably adapted for this mode of burning clay, as they have a strong draught, especially when the blower is put on; and there is no occasion for more coal than is just sufficient to completely destroy its adhesiveness.

It is presumed this mode of burning clay would very much diminish the expense of coal, and a boy could make it up in the form proposed.—Count Rumford recommended using clay, incorporated with charcoal, and formed into balls, for fuel; but charcoal is expensive, and tan may be got very low in the Summer season, though dry weeds, or chips, are as good.

A Lover of Improvements.

Philadelphia, January 23*d*, 1823.

* * *

WILD SHEEP OF NORTH AMERICA.

We have been favoured with a specimen of the wool of the *Ovis Montana Americana*, brought from the Rocky Mountains, near the sources of the Missouri and Columbia rivers. This wool, in fineness, softness, and delicacy, resembles that of the Cashmere goat, from which the beautiful shawls of that name are made. We learn on the authority of a gentleman, who has traversed the Rocky Mountains from the north branch of the Columbia to the Athapescow, that numerous flocks of these sheep inhabit that region. No doubt is entertained that this animal may be domesticated, and its fleece wrought into fabrics, which will rival in richness and beauty, the far-famed productions of the east. The French government have recently imported several hundreds of Cashmere goats from their native region, which thrive well in France, and promise to be a source of great national wealth. We hope this laudable example will be followed by the government of the United States; and that measures will be taken, through the agency of the enterprising officers of our army stationed on the Missouri, to procure a number of these curious and valuable animals. Perhaps it would be worth the expense to send an exploring party, specially for that object. A skin of this animal is deposited in the Lyceum of Natural History in this city, and was presented by John Jacob Astor, Esq.

New York Paper.

A FINE HEIFER.

Mr. Lewis Davis of Hopewell Township, Cumberland county, Pennsylvania, slaughtered on the 8th inst. a heifer aged 3 years 9 months and 15 days; raised and fattened by himself, which weighed as follows:

Quarters,	950 lbs.
Rough Tallow,	152¾ lbs.
Hide,	83 lbs.
Total,	1185¾ lbs.

FARMER'S NOTICE.

Keep your children at school if possible, and take care not to find fault against the school-master in their presence. Some people are always complaining of the school-master or mistress.—Let the school be ever so well kept they will be dissatisfied. If your children complain, ten chances to one they are in the wrong; and should you wish to injure them, you cannot do it more effectually than to join with them against their master.

It is time you should get wood for the coming year. Have your sled in good order; and improve the sledding when you have it. Keep your cattle well—it is a poor plan that some farmers have, of starving their cattle in order to sell hay in the spring. Have you not an old horse which is not worth keeping? Do not let another wint find him on your hands: give him to the crows.

It would be well to see about getting a good supply of fencing stuff. There is nothing that shows the thrifty farmer to better advantage than his fences. If your fences are poor, you hazard the loss of all your crops.

Is your threshing done? If so, you can spend those days which are stormy, still to advantage. Get all your farming tools in order—your yokes, bows, ax helves, shovels, carts, &c. &c. A good farmer will not find much idle time. Remember that the hand of diligence defeateth want; prosperity and success are the industrious man's attendants.

EXTRAORDINARY CALF.

On the 30th ult. a calf, only three months old, fed by Mr. Robert Hope farmer in Dike, was killed by Mr. William Halliday, flesher in Moffat, the gross weight of which was 29st 9lbs.—14lb. to the stone, viz—

Four quarters - - -	22st	12lb.
Head and feet - - -	2	0
Hide and tallow - - -	4	11
	29	9

Cattle Market Oct. 30.—As we do not happen to belong to the family of croakers, we would much rather be excused from the disagreeable task of reporting the weekly state of our cattle market. For a long time past, every succeding Wednesday has been worse than another; and when the farmer's prospects are to begin to brighten, and afford him at least a hope of better times, is still a problem unsolved and unsolveable. The Sands, this day, were again completely crowded with cattle, and altogether, the supply might be said to exceed that of any corresponding October market for some years past. As this is the season when the farmers lay in their winterers, a good many beeves, of course, changed masters; but the prices left the seller nothing to boast of. Cattle bought 3 or 4 months ago, so far from repaying the expense of feeding, were in many instances disposed of at dead loss, and, in others, driven home in the forlorn hope of finding a better market. Small Highland bullocks were sold at from 30s. to 45s. per head; good two year olds from £3 to £4 10s. and five guineas; and excellent three year olds at £7 10s. Indeed, last week, the very best lot of bullocks in the market—and beautiful cattle they were—only brought £7 4s. per head. The principal dealers "hung back" till near the "fag end" of the market, and then, we believe, excellent bargains were got from divers farmers, who had nothing else for it—who must meet "the laird," or the laird's factor, in a few days, and who know that to go empty handed is not the best way to obtain a reduction of rent.

London paper.

PUBLISHED IN THE AMERICAN FARMER, BY ORDER OF THE STATE.

Prince Georges County, January 6th, 1823.

A report of the Tobacco Inspected at and delivered from the Queen Anne Inspection Warehouse, during the quarter commencing on the seventh day of October, eighteen hundred and twenty-two, ending the sixth day of January, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Reinspected.	Total.
Number inspected.	68			hhds. 68
Number delivered.	401			401

WELLS & TYLER, Inspectors,
Queen Anne Warehouse.

TREASURY OFFICE, ANNAPOLIS, FEBRUARY 11th, 1823.

True copy from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

* * *

Rice Glue.—An elegant cement may be made from flour, which is at present used for that purpose in China and Japan. It is only necessary to mix the rice flour intimately with cold water, and gently simmer it over the fire, when it readily forms a delicate and durable cement.

THE FARMER.

BALTIMORE, FRIDAY, FEBRUARY 21, 1823.

☞ AMERICAN SENNA.—We have received samples of the leaf, and seed of Senna, cultivated in Alabama. It has been used in families there, and considered as good as the Alexandria Senna

FLAX DRESSING MACHINE.

We have been told by our friend. Mr. J. M. Ely of New-York, who has just returned from England, "that whilst he was in London, he visited "Mr. Brindley's establishment, where he saw "Flax in the various stages of its dressing, and "was informed that Mr. Brindley had invented "a machine, the specification of which he had "not filed, but which he says he will warrant "shall accomplish all that can be desired. The "old machines he is confident will be entirely "superceded."

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $7 25—Howard st. Superfine, $6 87½—Wharf, do. 6 12½—Wheat, white, $1 35 to 1 40—Red do., $1 32 to 1 35—Rye. 71 to 75 cents—Corn, 60 to 62 cts.—Oats, 35 to 37½ cents—Beef, live cattle, $5 to $5 50 per cwt.—Beef, 8 cents per lb.—Bacon, round, 10 to 11 cts.—Pork $4 50 to 5 50 per c lb. 6 to 8 cts. per lb.—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $8—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $5—Millet, $2—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons, 32 to 34 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, none in market—Herrings, No. 1, $3 62½ per bbl.—No. 2, $3 37½—Fine salt 80 to 90 cts. per bush.—Coarse; do. 75—Butter, 20 to 25 per lb.—Eggs, 25 cts. per doz.—Turkeys, 75 cts. to $1—Geese, 37½ to 50 cts. Chickens, $2 per doz.—Straw, $10 per ton—Hay, $16 to 17.

MARYLAND TOBACCO—Not in great demand, prices same as before.

FOR SALE,

NAKED OR NORTHERN BARLEY.

A few bushels of the above for sale at Robert Sinclair's, Ellicott-street, near Pratt street wharf. Price $4. For a description of this grain, see American Farmer No. 46, Vol. 4. This grain is well adapted to our climate, as has been well proved by the gentleman who raised it in Harford county, having commenced a few years ago, with a few grains.

AGENTS FOR THE AMERICAN FARMER.

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THE AMERICAN GARDENER.

CHAPTER V.

FRUITS.

Propagation, Planting, Cultivation.

LIST OF FRUITS.

299. Having in the former parts of this Chapter, treated of the propagation, planting, and cultivation of *all fruit trees* (the grape vine only excepted) it would remain for me merely to give a List of the several fruits; to speak of the different sorts of each; and of the mode of preserving them; but the *stocks* and *pruning* vary, in some cases; and, therefore, as I go along, I shall have to speak of them. Before, however, I enter on this Alphabetical List, let me observe, that only a part of the fruits mentioned in it are proposed to be raised in the *garden;* and that the 70 trees, shown in the *Plate* I, are intended to mark the places, and, in some degree, the form, of 6 Apple trees, 6 Apricots, 6 Cherries, 6 Nectarines, 30 Peaches, 6 Pears, and 10 Plums; and that the trelises, on the Southern sides of Plats, No. 8 and 9, are intended to mark the places for 4 Grape-Vines, there being another *Plate* to explain more fully the object and dimensions of this trelis work.

300. APPLE.—Apples are usually grafted on *crab stocks* (See Paragraph 281;) but, when you do not want the trees to grow tall and large, it is better to raise stocks from the seed of some Apple not much given to produce large wood.—Perhaps the Fall-Pippin seed may be as good as any. When you have planted the tree, as directed in Paragraphs 283 to 289, and when the time comes for shortening the head, cut it off so as to leave only five or six joints or buds. These will send out *shoots*, which will become *limbs.*—The tree will be what they call, in England, a *dwarf standard;* and, of this description are to be all the 70 trees in the garden. As to *pruning* see Peach; for, the pruning of all these dwarf standards is nearly the same.—The sorts of Apples are numerous, and every body knows, pretty well, which are the best. In my garden I should only have six apple trees; and, therefore they should be of the finest for the season at which they are eaten. The earliest apple is the *Junating*, the next the *Summer Pearmain.* Besides these I would have a *Doctor-apple*, a *Fall-Pippin*, a *Newtown Pippin* and a *Greening.* The quantity would not be very large, that six trees would produce; yet it would be considerable, and the quality would be exquisitely fine. I would not suffer too great a number of fruit to remain on the tree; and I would be bound to have the three last-named sorts weighing, on an average, 12 ounces. I have seen a Fall-Pippin that weighed *a pound.*—To *preserve* apples, in their whole state, observe this, that *frost* does not much injure them provided they be kept in *total darkness* during the frost and until they be used, and provided they be perfectly *dry* when put away. If put together in large parcels, and kept from the frost, they *heat*, and then they *rot;* and, those of them that happen not to rot, lose their flavour, become vapid, and are, indeed good for little. This is the case with the Newtown Pippins that are *sent to England*, which are half lost by *rot*, while the remainder are poor tasteless stuff, very little better than the English apples, the far greater part of which are either sour or mawkish. The apples, thus sent, have every possible disadvantage. They are *gathered carelessly;* tossed into baskets and tumbled into barrels at once, and without any packing stuff between them; the barrels are flung into and out of wagons; they are rolled along upon pavements; they are put in the hold, or between the decks of the ship; and, is it any wonder, that a barrel of *pomace*, instead of *apples*, arrive at Liverpool or London? If, instead of this careless work, the apples were gathered *(a week before ripe;)* not bruised at all in the gathering; laid in the sun, on boards or cloths, three days, to let the watery particles evaporate a little; put into barrels with fine-cut straw-chaff, in such a way as that no apple touched another; carefully carried to the ship and put on board, and as carefully landed; if this were the mode, one barrel, though it would contain only *half the quantity*, would sell for as much as, upon an average, taking in loss by total destruction, twenty barrels sell for now. *On* the deck is the best part of the ship for apples; but, if managed as I have directed *between decks* would do very well.—In the keeping of apples for market, or for home use, the same precautions ought to be observed as to *gathering* and *laying out to dry;* and, perhaps, to pack in the same way also is the best mode that can be discovered. *Dried Apples* is an article of great and general use. Every body knows, that the apples are peeled, cut into about eight pieces, the core taken out, and the pieces put in the sun till they become dry and tough. They are then put by in bags, or boxes, in a dry place. But, the flesh of the apple does not change its *nature* in the drying; and therefore, the *finest*, and not the *coarsest*, apples should have all this trouble bestowed upon them.

301. APRICOT.—This is a very delightful fruit. It comes earlier than the peach; and some like it better. It is a hardier tree, bears as well as the peach, and the green fruit, when the size of a hickory-nut, makes a very good tart.—When ripe, or nearly ripe, it makes a better pie than the peach; and the tree, when well raised, planted and cultivated, will *last a century.*—Apricots are budded or grafted upon *plum stocks*, or upon stocks raised from Apricot-stones. They do not bear so soon as the peach by one year.—For the pruning of them see Peach.—There are many sorts of *Apricots*, some come earlier, some are larger, and some finer than others. It may be sufficient to name the *Brussels*, the *More-Park*, and the *Turkey.* The first carries most fruit as to number; but, the others are larger and of finer flavour. Perhaps two trees of each of these sorts would be the most judicious selection I have heard that the *Apricot* does not *do* in this country! That is to say, I suppose, it will not *do of its own accord*, like a peach by having the *stone flung upon the ground*, which it certainly will not; and it is very much to be commended for refusing to *do* in this way. But, properly managed, I know it will *do*, for I never tasted finer Apricots than I have in America; and, indeed, who can believe that it will not *do* in a country, where there are no blights of fruit trees worth speaking of, and where melons ripen to such perfection in the natural ground and almost without care?

302. BARBERRY.—This fruit is well known. The tree, or shrub, on which it grows is raised from the *seed*, or from *suckers*, or layers Its place ought to be in the *South Border;* for, the hot sun is rather against its fruit growing large.

303. CHERRY—Cherries are budded or grafted upon stocks raised from cherry-stones of any sort. If you want the tree tall and large, the stock should come from the small black cherry tree that grows wild in the woods. If you want it *dwarf*, sow the stones of a *morello* or a *May-Duke.* The sorts of cherries are very numerous; but, the six trees for my garden should be, a *May-cherry*, a *May-duke*, a *black-heart*, a *white-heart*, and *two bigeroons.* The four former are well known in America, but I never saw but two trees of the last, and those I sent from England to Busleton, in Pennsylvania in the year 1800. They are now growing there, in the gardens of the two Messrs Paul's. Cuttings from them have been carried and used as grafts all round the country. During the few days that I was at Mr. James Paul's, in 1817, several persons came for grafts: so that these trees must be pretty famous. The fruit is large, thin skinned, small stone, and fine colour and flavour, and the tree grows freely and in beautiful form. For *Pruning* see Peach. To *preserve* cherries gather them *without bruizing;* take off the tails; lay them in the sun or on dry deal boards; when quite dry, put them by in bags in a dry place. They form a variety in the tart-making way.

304. CHESNUT.—This is an inhabitant of the woods; and, as to its *fruit* I have only to say, that the American is as much better than the Spanish as the tree is a finer tree.—To *preserve* chesnuts, so as to have them to sow in the spring, or to eat through the winter, you must put them into a box, or barrel, mixed with, and covered over by, *fine dry sand.* If there be *maggots* in any of the chesnuts, they will work up through the sand, to get to air; and, thus, you have your chesnuts sweet and sound and fresh.—To know whether chesnuts will *grow*, toss them into water. If they *swim*, they will not grow.

305. CRANBERRY.—This is one of the best fruits in the world. All tarts sink out of sight, in point of merit, when compared with that made of the American Cranberry. There is a little dark red thing, about as big as a large pea, sent to England from the north of Europe, and is *called* a Cranberry; but, it does not resemble the American in taste any more than in bulk.—It is well known that this valuable fruit is, in many parts of this country, spread over the low lands in great profusion; and that the mere gathering of it is all that bountiful nature requires at our hands.—This fruit is preserved all the year, by stewing and putting into jars, and when taken thence is better than currant jelly.—The fruit, in its whole state, laid in a heap, in a dry room, will keep sound and perfectly good for six months. It will freeze and thaw and freeze and thaw again without receiving any injury. It may, if you choose, be kept in water all the while, without any injury. I received a barrel in England, mixed with water, as good and as fresh as I ever tasted at New York or Philadelphia.

306. CURRANT.—There are *red*, *white* and *black*, all well known. Some persons like one best, and some another. The propagation and cultivation of all the sorts are the same. The currant tree is propagated from *cuttings;* and the cuttings are treated as has been seen in Paragraph 276. When the tree has stood two years in the Nursery, plant it where it is to stand; and take care that it has only *one stem.* Let no limbs come out to grow nearer than six inches of the ground. Prune the tree every year. Keep it *thin of wood.* Keep the middle open and the limbs extended; and when these get to about three feet in length, cut off, every winter, *all the last year's shoots.* If you do not attend to this, the tree will be nothing but a great bunch of twigs, and you will have very little fruit. Cultivate and manure the ground as for other fruit trees. See paragraphs 289 to 296. In this country the currant requires *shade* in summer. If exposed to the full sun, the fruit is apt to become too sour. Plant it therefore, in the South Border.

307. FIG.—There are several sorts of Figs, but all would *ripen* in this country. The only difficulty must be to protect the trees *in winter*, which can hardly be done without covering pretty closely. Figs are raised either from *cuttings* or *layers*, which are treated as other cuttings and layers are. See Paragraphs 275 and 277. The

fig is a *mawkish* thing at best; and, amongst such quantities of fine fruit as this country produces, it can, from mere curiosity only be thought worth raising at all, and especially at great trouble.

308. FILBERD.—This is a sort of *Nut* oblong in shape, very thin in the shell, and in flavour as much superior to the common nut as a Water-melon is to a pumpkin. The American nut tree is a *drawf* shrub. The filberd is a tall one, and will, under favourable circumstances, reach the height of *thirty feet*. I never saw any Filberd trees in this country, except those that I sent from England in 1800. They were six in number, and they are now growing in the garden of the late Mr. James Paul, of Lower Dublin Township, in Philadelphia county. I saw them in 1817, when they were, I should suppose, about 20 feet high. They had always borne, I was told, very large quantities, never failing. Perhaps five or six bushels a year, measured in the husk, a produce very seldom witnessed in England; so that, there is no doubt that the climate is extremely favourable to them. Indeed to what, that is good for man, is it not favourable?—The Filberd is propagated from *layers* or from *suckers*, of which latter it sends forth great abundance. The layers are treated like other layers (See Paragraph 276), and they very soon become trees. The suckers are also treated like other suckers. (See Paragraph 277); but layers are preferable, for the reasons before stated.—This tree cannot be propagated from *seed* to bear *Filberds*. The seed, if sown, will produce *trees*; but, those trees will bear poor thick-shelled nuts, except it be by mere accident. It is useful to know how to *preserve* the fruit; for it is very pleasant to have it all the winter long. Always let the filberds hang on the tree till *quite ripe*, and that is ascertained by their coming out of the husk without any effort. They are then *brown*, and the butt ends of them *white*. Lay them in the sun for a day to dry; then put them in a box, or jar, or barrel, with very fine *dry sand*. Four times as much sand as filberds, and put them in any dry place. Here they will keep well till April or May; and, perhaps, longer. This is better a great deal than putting them, as they do in England, into jars, and the jars into a cellar; or if they do not *mould* in that situation, they lose much of their sweetness in a few months.—The burning sun is apt to scorch up the leaves of the Filberd tree. I would, therefore, plant a row of them as near as possible to the South fence. Ten trees at eight feet apart might be enough.—The Filberd will do very well *under the shade of lofty trees*, if those trees do not stand too thick. And it is by no means an ugly shrub, while the wood of it is, as well as the nut wood, which is, in England, called *hazle*, and is a very good wood. In the oak-woods there, hazle is very frequently the *under wood*; and it makes small hoops, and is applied to various other purposes. I cannot dismiss this article without exhorting the American farmer to provide himself with some of this sort of tree, which, when small, is easily conveyed to any distance in winter, and got ready to plant out in the spring. Those that are growing at Mr. Paul's were dug up, in England, in January, shipped to New York, carried on the top of the stage, in the dead of winter to Busleton, kept in a cellar till spring, and then planted out. These were the first trees of the kind, as far as I have been able to learn, that ever found their way to this country. I hear that Mr. Stephen Gerrard takes to himself the act of first introduction, from France. But, I must deny him this. He, I am told, brought his trees several years later than I sent mine.

309. GOOSEBERRY.—Various are the sorts, and no one that is not good. The shrub is propagated precisely like that of the currant. I cannot tell the cause that it is so little cultivated in America. I should think (though I am by no means sure of the fact) that it would do very well under the shade of a South Fence. However, as far as the fruit is useful in its *green* state, for tarts the *Rhubarb* supplies its place very well. The fruit is excellent when well raised. They have gooseberries in England nearly as large as pigeon's eggs, and the crops that the trees bear are prodigious. *(To be Continued.)*

[*Communicated for the Massachusetts Agricultural Repository by a Horticulturist.*]

ON THE CULTURE OF GRAPE VINES.

Many gentlemen in this neighbourhood have given considerable attention to the cultivation of Grapes in the open air upon open trellises, and some have succeeded remarkably well, although they have had to contend with the many difficulties, which that delicate and delicious fruit is subject to in this climate.

Having given some personal attention to this fruit for several years, I am satisfied that it can be raised in great perfection, and with little trouble to the cultivator, if he set out right in the first instance, and follow up the system prescribed, with attention and care.

Although most men, who have any knowledge in Horticulture, know more or less respecting the mode of cultivating this plant,—yet there are many new beginners, who may collect some hints from these notes, which may aid them in the outset; and many gentlemen, who have been long in the habit of raising grapes in their gardens, may obtain some information as to the means of preserving the plants from the destructive insect which has of late years attacked the vines, and destroyed the promise of their early growth and the fair appearance of their fruit.

The best treatises on the subject of raising grape vines, recommend planting the cuttings in pots,—but in this country it is entirely unnecessary, as the plants may be easily raised in the open ground with little trouble and no expense; and if we can add to our collection of fine fruits, one, which in sickness, as well as in health, is the most refreshing and nutritive of any that we possess, with little expense and even with profit to the cultivator, we shall do a great good.

The best mode of raising the plants is by cuttings taken from the vines at the Fall pruning, and preserved in earth till spring. These may be made either of one eye or bud or of four or five, attached to a small portion of the two years old wood, forming a cutting in the shape of a small mallet.

The 1st year.—They may be raised in a small nursery bed, prepared of a good light soil—set in the ground six inches distant from each other, with the rows wide enough apart to permit them to be weeded with a narrow hoe; or, they may be put in the first instance, where they are to be reared, and left to grow, at the distance of five, six, or seven feet, or more according to the wishes of the cultivator. In this latter case there should be three cuttings put into each spot six inches apart, to insure the setting of one. When this is ascertained with certainty, the two weakest may be withdrawn, leaving the rest of the three to grow. If the cuttings be of one eye each, they should be from the last year's growth, and a small piece of the branch an inch long should be left attached to the bud and extending half an inch on each side of it.—These should be planted two inches below the surface with the bud uppermost, and a small stake placed by the side of them that they may not be disturbed. If the cuttings are of several eyes, they should be laid in the ground sloping, leaving one eye level with, or only just above the surface. They should be kept moist, but not wet, as this will rot them. A spot which receives the morning sun till eleven o'clock, and not afterwards, is the best for a nursery bed for them, but for permanency they should be planted where they will receive the sun longest, and in this case they should be shaded at noon day until they have entirely put out. One bud only should be allowed to push from the cutting the first year; the plant should be kept free from weeds; the earth kept light around it, and as soon as the shoot has attained strength enough to produce laterals, they should be rubbed out, and the shoot tied to a small stake, by which means it will gain firmness, and the admission of the sun and air to the shoot will prepare it to bear the frost of the Fall, and prevent its imbibing the moisture which it would otherwise be subject to, when covered with earth in the winter. By the 1st Nov. the shoots may be cut down to two eyes, and by the middle of the month, if it be dry weather, they may be covered over with earth, forming a slope to cast off the wet and prevent the rains from penetrating—as the drier the plant is kept during the winter, in the better state it will be in the succeeding spring.

The 2d year,—The plants should not be uncovered in this climate till the middle of April.—Those from the nursery should now be transplanted to the places where they are to remain; a shoot from each eye should be permitted to push, but as soon as you have ascertained which of the two will be the strongest and the best situated, you will preserve that, and rub out the other.—The shoot preserved you will be careful to tie up to a small stake as soon as it has length enough for this purpose, to prevent its being broken by the wind or other casualty. During the summer, the laterals from the four or five lowest buds must be rubbed out, and the shoot be carefully protected by being kept tied every eight or ten inches.

The next Fall you may cut this shoot down to two buds, (not counting the one in the crotch of the plant between the old and new wood), and cover over as before.

The 3d year.—You will allow shoots to push from both the eyes, and suffer them to grow, taking care of them as recommended above; but the bud in the crotch must be rubbed out. This year you must rub out the laterals from the five lowest buds, and nip in the other laterals to one eye, so that if the plant grows luxuriantly the sap may burst from the buds of the laterals, and not from those of the main branch, as it would do if the vine was dressed too close. Be careful to keep the branches tied up that they may not be broken. In November, cut down the two branches as follows: the most feeble of the two, to two buds, to produce wood branches the succeeding season; and the strongest, to three buds, for fruit branches, and cover them as usual.

The 4th year.—If you keep your vines properly dressed, you may have your first fruits without injury to your plants. After this the system to be pursued must depend on the strength of your vines, and this will depend on the goodness of the soil and the care you take of your plants. But as a general rule, the following points must be attended to.

1st. The number and length of your fruit branches must always depend on the strength of your plant; the wood branches are always to be cut down to two eyes.

2d. No more branches should be left on the vine than it can nourish well, and abundantly; this will depend on its age, and the soil in which it grows.

3d, The branches should be cut in alternately for wood and fruit branches, observing to cut for wood branches as low down on the plant as possible, so as to renew your wood near the bottom annually. No shoots should be permitted to grow from the old wood, unless wanted for this purpose.

4th, No more shoots should be permitted to grow than can be laid in clear, and handsome, and without confusion on the trellis, and so as to admit the sun and air freely among the branches.

5th, The laterals should be rubbed out of the wood branches six or eight eyes high, and those that are permitted to remain should be pinched into one bud. The laterals on the fruit branches should be rubbed out from the insertions of the shoot to the uppermost fruit inclusive, and the others pinched in as above. If the shoots are *very* strong, the upper laterals may be allowed to grow, to take up a greater portion of the sap; but this should not be done unless there is danger of the eyes bursting in the main shoots. Be careful always to keep the shoots tied up near their top.

6th, Never leave more than five good eyes on a fruit bearing branch, unless your vine is confined to a narrow space, and you are obliged to preserve only two or three fruit branches; in this case the length of the branch must correspond to the nourishment it will receive from the plant. Select the roundest and fairest branches for fruit, and the lowest and most feeble for wood. The closer the buds are together, or the shorter the joints of the branch, the better they are for fruit; these may in general be cut to three, four, or five eyes according to their strength. But in vineries covered with glass, where two fruit bearing branches only are left on strong vines; —twenty, thirty, and forty buds are sometimes left on fruit branches.

The foregoing rules will be sufficient for any one to build up a vineyard sufficiently large to supply himself—his friends, and the market with grapes. But to promote and forward their maturity and size, the following course may be pursued.

The first of July you will be able to see the state of your fruit, which will be just formed.—At this time select the highest fruit branches and those which have the finest appearance of fruit upon them, and perform the following operation on the two years old wood, from which these branches proceeded, taking care not to cut below any of the wood branches.

Take a pruning knife with a smooth edge, and hawk's bill, and pass it round the branch where the bark is clear from knots, cutting deep enough to reach the sap wood of the plant; at a quarter or 3-8ths of an inch below the first cut make another, running parallel with the first; then make a perpendicular cut through this section of the bark the same depth, and you may take out the ring of bark clear from the branch. This will not prevent the sap rising into the upper part of the branch, but it will prevent its descending below this cut, by which means it will be retained in, and distributed throughout the upper part of the branch, in a greater portion than it could otherwise be, and the branch and fruit will both increase in size much more than any of those that are not thus treated, and the maturity of the fruit will be advanced very much.

This has been denominated *Girdling*. If the plant is very vigorous and the season very favorable, the wound will soon be closed, so that it may be necessary to open it a second time. The process does not injure the plant, as you only girdle the fruit bearing branches, which you would in case cut out at the Fall pruning, to make room for the branches which you have been bringing forward to give you fruit the succeeding year. This may be kept up from year to year, and give you a succession of ripe fruit from the 1st of Sept. to the close of the season. The fruit on those branches which are not girdled will ripen the latest of course, but neither these, nor those which have been girdled, should be shortened, as is customary on vines not thus treated.

By this practice, which was first suggested in the transactions of the Horticultural Society of London a few years since, and first brought into use in this country with success by the corresponding secretary of your society, I have raised grapes in the open air this year, the bunches of which weighed from eight to twenty-eight ounces; and the berries measuring from two to three inches in circumference. On one vine which I planted a few years since *a cutting* in the spot where it now grows, I had seventy branches of fine chasselas, weighing from eight to eighteen ounces each.

But the grape vines have of late years been attacked by a small insect which makes its appearance first in June—but is most abundant in August. This insect, if left to increase destroys the vegetating principle in the leaf, and the plant languishes, the fruit mildews, and the labour and care of the cultivator is lost. Some gentlemen have abandoned their vines in consequence of the depredations of this insect, and others with great labour, and expense of time, have attempted, but in vain, to destroy them with alkalies and tobacco juice. This has to be sure operated to check them partially, but not effectually. To remedy this evil you have only to make a small light frame twelve or fourteen feet long, in the form of a soldier's tent—but with hinges of leather where the top joins so that this tent may be shut up, or opened at the bottom to any width you may require, according to the height of your trellis. This light frame, which should be made of slats of boards from one to two inches broad, may be covered with an old sail or some cheap glazed cotton cloth which will stop the smoke, leaving cloth enough loose at each end, to close over, and prevent the smoke from escaping when the tent is spread over the trellis.

A few tobacco stalks moistened and put on some coals in a pan, will be sufficient to smoke the vines thoroughly; and as the tent is easily moved along the trellis on small wheels, one man may, in a few hours, extirpate this enemy of the vineyard. Vines that are already attacked by this insect to any great degree should be smoked in June, July, and twice in August, or oftener if you find the insect is not completely destroyed.

The insects are first seen on the under part of the leaf, without wings—very active but easily destroyed if touched. They afterwards assume the winged state, when it is very difficult to get at them, as they fly off on the vines being touched. They are yellow, striped with brown across the back. The moment the smoke ascends, the winged insects quit the leaves and fall to the ground dead or alive; the young ones perish, but the older ones will revive if not destroyed in their torpid state. To effect this, you have only to cover the ground under the tent with a piece of wet cloth before you begin to smoke, to which they will adhere until the tent is removed, and they are revived by the atmospheric air; to prevent which you will roll, or twist, the cloth each time that you remove the smoke house, or tent, and replace it again each time before you smoke, by which means they will be effectually destroyed. This simple and cheap operation will keep your vines clear of this troublesome and destructive insect, and you may, if the season be warm, insure a good harvest; if otherwise, you will be sure, if the vines be girdled, to ripen a portion of your fruit, at least.

PENNSYLVANIA AGRICULTURAL SOCIETY.

At the first Quarterly Meeting, held at Norristown, on Saturday, the 11th of January, 1823, the following Resolutions were unanimously adopted:—

That the President be authorised to petition the Legislature, for an Act of incorporation for this Society, and for such a modification of the Act, entitled an "Act for the promotion of Agriculture, &c." as shall authorize its officers to receive from the Commissioners of Counties Dollars, and to perform their duties as effectively, as if the Pennsylvania Agricultural Society had been organized, in conformity with the sections of said Law—and that he shall endeavour to obtain, some provision by which the *sale of Spirituous Liquors shall be effectually prevented within the distance of three miles from the place at which the Agricultural Exhibitions shall be held, except at houses licensed according to Law.*

That as this is an Association of *practical* Farmers, disposed to acquire and communicate information derived from *essays on the soil*, it shall be the duty of one of the Assistant Secretaries, to record the substance of all verbal communications, which any of the members shall make, at the quarterly meetings.

That a committee be appointed to report upon Mr. Pope's Thrashing Machine, which has been this day exhibited. Whereupon Job Roberts, John Hare Powell, and Henry L. Waddell were appointed.

That the Directors be instructed to give notice in such manner, as they shall think fit of the intention of this Society, to award premiums, at their Annual Meeting, for Neat Cattle, Sheep, Horses, Swine, Crops, Implements of Husbandry, and Household Manufactures—the value of the prizes, to be determined at the next Quarterly meeting. Accordingly, William Harris of Chester county, George Sheaff of Montgomery county, Henry L. Waddell of Bucks county, Aaron Clement of Philadelphia county, and Thomas Serrill of Delaware county, were constituted a Committee from the Board of Directors—Job Roberts, Manuel Eyre, Samuel West, and Chas. Downing were subsequently appointed to aid them.

The Committee appointed to examine Mr. Pope's Thrashing machine, reported—

"After having carefully examined the construction, and observed the performance of Mr. Pope's Hand Thrashing machine, we are disposed to think, that it is well adapted, to the purposes of small farms; as it has in our presence, thrashed Wheat without difficulty, at the rate of Sixty sheaves an hour."

JOB ROBERTS.
JOHN HARE POWEL.
HENRY L. WADDELL.

Mr. Joseph Kersey of Chester County, made a communication on an ingenious mode of making Thrashing flails—a communication on Sheep, accompanied by observations, on the expulsion of Rats.

Mr. Job Roberts of Montgomery county, communicated the result of his experience, corroborative of Mr. Kersey's remarks.

Mr. Powell of Philadelphia county, made the following communications on Mangel Wurtzel and Millet:—

I have certificates, accompanied by the oaths of my farmer and his assistant, showing that 982½ bushels of Mangel Wurtzel were produced on

155¼ perches of land, which had not received more manure than is usually given to potato crops in this county. The soil had been very deeply ploughed, and stirred by Beatson's Scarifier, the manure was after ploughed nine inches under the surface, the Scarifier having been again applied, the roller and harrow were used to reduce the tilth. In April, the seeds were dibbled an inch deep—three inches apart, in rows thirty inches asunder. Soon after the plants appeared, they were thinned, and left at intervals of six inches—when their leaves had become two inches long, they were cleaned by a four inch triangular hoe. The earth and weeds were thrown from them, by a very small one horse plough, leaving a space of four or five inches unbroken next to them. The furrow was returned by Davis' shovel plough; they were again hoed, and left a foot apart. In the first week of November, they were drawn, closely cut beneath the crowns, measured, piled in a cellar in rows, as wood, and covered with sand. The expense of planting, tilling, and gathering the crop, was about equal to that of Indian corn.

My neat cattle prefer Mangel Wurtzel to any roots which I have offered to them. I have found its effects, in producing large secretions of *good* milk, very great. I selected in November, two heifers of the same breed, and very nearly of the same age, and in similar condition; they were tied in adjoining stalls, and have been fed regularly three times a day, by the same man. One of them has had three pecks of Mangel Wurtzel, and four quarts of corn meal daily; the other, four and a half pecks of Mangel Wurtzel. The last, which has had Mangel Wurtzel alone, is in the condition of good beef, the other is not more than what graziers call half fat.

I am aware that repeated experiments on various animals, must be made, to sanction any general conclusion, as to the comparative effects of different sorts of food. I mention the trial with the heifers, but as one of a series of attempts which I shall make, to determine, whether the great German Beet can be as effectively applied to the formation of fat, as to the production of milk, and the enlargement of size.

Thirty perches of this field produced more beets, than nearly two acres which were differently managed at the same time. Much depends upon the kind of seed—upon the great depth of ploughing, and fineness of the tilth—but not less is dependant upon the quantity of *animal manure.* Among the various practices into which we have been seduced, by the plausible theories of the advocates of British systems of husbandry, there is none which appears to me more absurd, than that which has led us to drill, or dibble, our crops on ridges. The English farmer wisely contends with the evils produced by too much rain—the American husbandman should as anxiously guard against his most formidable enemy, drought. I am inclined to think that there is no crop, cultivated in this state, which ought not to be put upon a flat surface.

In citing the experiment upon feeding with Mangel Wurtzel, I have no intention to convey an idea so preposterous as some of the "Fancies" have conceived, that Mangel Wurtzel, or any of the fashionable roots of the day, should interfere with the king of vegetables, Indian corn; or that where land is cheap, and labour dear, a farmer is "wise to amuse himself," and feed his bullocks by plucking the luxuriant leaves of "the majestic Beta Altissima." I would merely recommend its cultivation, to a limited extent, on all farms.—Its influence upon some cattle, milch cows, and more especially upon calves, during their first winter, is very important. I have attended, with great accuracy, to the ills which are brought upon most young quadrupeds, when first weaned; and have invariably found them materially diminished by the use of succulent roots.

The application of Mangel Wurtzel as food for sheep, is not the least important of its uses.—Ewes yean usually at the season when grass cannot be supplied. The health of themselves, and the thrift of their lambs, essentially depend upon succulent food being had. I am inclined to think, that no small portion of the success which English breeders have met, is to be ascribed to the large stores of roots, which they always have at command. It cannot be denied that Indian meal will, of itself, in most cases, produce extraordinary fatness, as well as great size—but I have been led to believe, that diseases are early engendered by this species of forcing, which is always expensive, and too often eventually destroys the animal, which has been thus reared.

I was induced to cultivate this vegetable, by the success of Mr. Isaac C. Jones, who I may venture to assert, after the most diligent enquiry, is the only person, by whom it had been grown in this state, except in small patches or gardens, until within two years.

I am, &c. your's.

JOHN HARE POWELL.

Jonathan Roberts, Esq.
President of the Penn. Agricultural Society.

I have made many experiments on various soils, and at different seasons, to ascertain the product, as well as the properties of Millet.—Upon light land, in good condition, it succeeds best. It requires in all cases, fine tilth, and as much strength of soil as is necessary to produce heavy oats. I have not seen, either in Europe or America, any green crop, which so largely rewards accurate tillage and plentiful supplies of manure, as the species of millet usually grown in this and the adjacent counties. I have sown it from the first of May, to the 20th of June, and have invariably obtained more fodder than could have been had from any grass under similar circumstances. In the autumn, eighty bushels of *caustic* lime per acre, were strewed upon an old sward, which was *immediately* ploughed, closely harrowed, sown with rye, and rolled—the rye was depastured in the winter and succeeding spring—early in April the land was ploughed again; the lime and decomposed vegetable matter was thus returned to the surface— about three weeks after it was harrowed, to destroy weeds; early in May it was again harrowed for the same purpose—within a fortnight it was stirred with Beatson's Scarifier, to the depth of nine inches, harrowed, sown with Millet, and rolled. The crop was fairly estimated at three tons per acre. After the millet was cut, the field was stirred, and repeatedly harrowed, to destroy the after growth of noxious plants. I intend to again sow rye, not only to obtain pasturage, but to protect the soil from the exhalations of the sun. In the succeeding spring, a slight dressing of fresh manure was ploughed under; the scarifier, roller, and harrow were used at intervals as before. On the 5th of May, five bushels of millet seeds were sown on four acres—on the 5th of July the crop was hauled, and estimated at four tons per acre. I have obtained this season, forty tons from sixteen acres, of which four only had been manured, the remainder could not have borne a good wheat crop. One of the loads was weighed; an account of them was regularly kept; their size was made as nearly equal as possible. I have generally used a large quantity of seed, as not more than two-thirds of that which is usually sown, will vegetate. Whilst my oxen consumed millet in its green state, they performed their work with more spirit and vigour than they had done before, or have shewn since, except when fed with grain. My cattle, of all ages, prefer it to both red, and the best white clover, meadow or timothy hay.

I am not disposed to cultivate it as a farinaceous crop, since I have found great difficulty in protecting it from the ravages of immense flocks of birds, which it attracts, and in securing it sufficiently early to prevent a large part of the grain from being left on the ground. The seeds on the upper parts of the stalks, generally ripen, and fall, before those below have been filled. I therefore invariably cut it, when the upper parts of most of the heads contain seeds, which are hard. All my observations have confirmed me in the belief, that in this stage it affords fodder, more nutritious, and more easily made, than any sort of hay. The expense of tilling the land, in the accurate manner, which I have detailed, is not so great as at first view would appear. A yoke of good oxen can scarify three acres and an half, without difficulty, in one day. I would recommend millet, not merely for its value as a food, but for the means it affords of making clean the land, without summer fallows, or drill crops. The ingenious arguments which have been adduced to prove, that deep stirring between growing crops is advantageous to them and the soil, are founded upon English experience, properly directed by close attention to the effects of a moist climate. Some of our writers have profoundly asserted, that as "dew drops" are found on the under leaves of plants after deep stirring has been given in a time of great drought, the practice is sound. I should suggest, if I were allowed, that moisture had better be at such times, conveyed to the roots, than be exhaled by the sun, or placed on the leaves until his rays shall have exhausted it all. The valuable parts of most manures, readily assume the gaseous form—every deep stirring, to a certain extent, in *hot* weather, therefore, impoverishes the soil. Deep ploughing, at *proper* seasons, is, I conceive the basis of all good farming; such crops as shall enable the husbandman to extirpate weeds, and obtain large supplies of fodder, without much exhaustion, should be the great objects for his aim. I would propose that a foul sward receive its proper quantity of quick lime, which should be spread, and ploughed under, in its *caustic* state, in the early part of September; that the field be harrowed sufficiently; sown with rye at the rate of two bushels per acre, as early as possible—that it be depastured late in the autumn, and early in the spring—that in May, it be again ploughed three inches deeper than before—that it be harrowed, and left until the small weeds begin to appear—early in June, Millet should be sown—in August, the crop can be removed after the labours of the general harvest. The field should be slightly stirred with the scarifier, occasionally harrowed, and left throughout September, for the destruction of weeds as before. In October it may be manured, and sown with wheat, or left for a crop of Indian Corn. I am, &c. your's,

JOHN HARE POWELL.

Jonathan Roberts, Esq.
President of the Penn. Agricultural Society.

TO THE EDITOR OF THE AMERICAN FARMER.

ON THE PEA—AS CULTIVATED IN NORTH CAROLINA.

Spring Hill, Lenoir County, North
Carolina, May 8th, 1821.

Dear Sir,

Agreeably to your request I forward you, this day, thirty peas of each of the three different kinds which I cultivate, being enough for two or three hills, if planted in the hill in the way we do among our corn. The pea dropper, with the peas in a basket on his arm, follows the plough, and with a pipe bowl or end of the neck of a gourd in the other hand, dips the peas out of the basket, and on getting directly between two hills of corn, drops the peas in the last furrow made by the plough, and covers the peas with his foot; or if the ground is old and free of stumps, he drops the peas in the last furrow but one, and the plough by the last furrow covers the peas, which is by far the best way if the land will admit it to be done, as then the peas come up on a ridge, and are not so apt to be washed up by heavy rains between the 20th of May and the 20th of June, the time within which we wish to get our peas all planted. This is the way where we do not ridge up our land as advised by Arator; where that is done, we open a hole on the ridge between the corn with a hoe, drop the peas in it and cover with the foot or hoe—you will probably think it strange that we put so many peas in a hill, but be assured it is correct, and we cut down the gourd neck, or fill the bottom of the pipe bowl, till we find that on dipping into the basket to fill it, it will hold on an average about twelve peas, and these are dropped as nearly together, or in a heap, as can well be done, as the hand walks along the row without stooping. After the peas are planted, we generally plough the corn altogether the other way. But in this way, among your corn, I do not think the pea would ripen before frost, but planted by themselves in a patch, I have no doubt our earlier kinds would come to perfection. Of the kinds I send you, the black pea is nearly a fortnight earlier than either of the others, which ripen nearly at the same time; if any difference, I think the corn pea rather earlier than the tory. I plant the pea principally for fattening hogs, cattle and sheep, which are turned into the fields as soon as the corn is gathered, and eat off the peas at their pleasure, and this saves me the trouble of gathering the peas, though doubtless they waste a great many, and our food would go much further in fattening our stock, could we gather it and feed it away with regularity to them But our cotton crop requires to be gathered at the same time with our peas and corn, and therefore we find it best only to take the time necessary for saving our seed peas in those districts of our country, where we go upon raising pork for market, which is the case in my neighbourhood, but on the Roanoak where cotton does not do so well, and lower down the country, they pick large quantities of peas for sale, which are generally shipped from or consumed at our sea ports, before this season of the year; and therefore I fear I shall hardly be able to get the few bushels you want to experiment upon in the broad cast way, for improving worn-out lands as a substitute for clover. From the appearance of the leaf and vine, as well as roots of those I send you, I think you will perceive that my suggestion to XYZ is a good one. But I will spare no pains in my endeavours to have two or three barrels of the peas sent to you; William Dun of Newbern, and Abner P. Neale of Washington, both merchants, are the gentlemen I shall apply to, to send you the peas. Plant those I send you by mail in hills about three feet apart about the 5th of June, and hoe them two or three times to keep the weeds and grass under: light sandy land suits them best, and I would try the plaster on some of the hills, barely to see if it made any difference. In the western parts of this state I presume the pea does not do well, as they do not cultivate it. The soil of the western parts of this state is pretty much the same with that of the western parts of Virginia, with which you are acquainted. With us, in our stiff rich lands, the pea runs all to vine, but yields very little fruit, which probably is the case in our western countries.

In sowing broad cast for manuring, I would sow one and a half to two and half bushels of seed to the acre, if I had seed a plenty, on land which had been previously broke up, and if time admitted, harrowed; and cover them with the plough or harrow from one to two inches deep; and this is all, when sowed for manure, that should be done to them, for the more weeds and grass grows with them the better.

I am promised, by an acquaintance, a few peas of an earlier kind than either of those I send you; should I get them in time I will forward you a few, as I am certain it must be an object with you to get of the earliest sorts, so as to be able to save seed for the next year's sowing, before you turn in the vines for manure. As to the pea vines, when we find we are likely to be short of fodder, we save them for hay; cattle, horses and sheep, eat them greedily; in fact, they eat the dry vines as they stand in the field all the winter through, particularly in moist weather. Sheep are fonder of the hay made of the pea vine, cut while green and cured, than they are of Indian corn blades, or any kind of hay that I have met with. I have said much more already on the subject of this pea than I fear you will have patience to read, but still not enough to give you a full idea of its importance to the farmer in the level sandy country of the Carolinas. Cooked green or dry with a little pork or bacon, it furnishes a substantial and very palatable food for our labourers; in fact, I am very fond of them myself, particularly of the corn pea, which were we in possession of the art of splitting and drying, would be as good or better than the English split pea, so much used on board their vessels.

Your's respectfully,

WILLIAM BLACKLEDGE.

N. B. If you know or can procure correct information of the manner in which the English *dry and split* their peas, I should be much pleased to have it explained in your useful paper.

☞ We sincerely hope some one of the respectable English gentlemen farmers, residing in this country and subscribers to the Farmer, will communicate this information if in their power.—*Ed. Am. Far.*

* * *

FOR THE AMERICAN FARMER.

LETTER FIRST—FROM A FATHER TO HIS SON

> " A father blest with an ingenuous Son—
> Father, and friend, and tutor, all in one."

My very dear boy,

As you have arrived at the time of life, when lads usually fix on the business they intend to pursue, at a more mature age, and as you, from a child, have manifested a strong partiality for agriculture, I am now induced to address a few letters to you on that subject, and also on your future conduct in life, in order that you may not be left entirely destitute of a father's advice, should God call me from this world, before your judgment has been matured by the experience of age.

It is very common to hear persons, who have lived long, and have seen much of mankind, complain of the awkward pertness, and self-sufficiency of youth, and to observe, how much more pleasing boys would appear, were they to express themselves with becoming diffidence, and respect to their superiors in age, who certainly have had a much better opportunity of knowing, " what is truth," than lads just emerging from childhood; indeed, I wish to call your attention, in a particular manner, to this subject, and to urge you to guard against acquiring a habit of expressing yourself with an air of self-sufficiency and conceit, as no man likes to be dictated to by a mere boy, or indeed by any one.

Accustom yourself to active and industrious habits, for as Paley says, " man is a bundle of habits ;" and always bear in mind, that what a man professes to know, he should be thoroughly acquainted with—prefer being alone, to spending your leisure time, with the idle and dissolute; pursue wisdom with all your might, reading much, but selecting such books, only; as will add much to your stock of sterling knowledge, and be particularly attentive to your religious duties, always bearing in mind, that the self-conceited infidels, of the present day, have not found even a substitute for the bible—strive to do your " duty towards God, and your duty towards your neighbour, and to do unto all men, as you would, they should do unto you ;" by this course you may learn what constitutes real honor, justice, honesty, truth, disinterestedness, generosity, humanity, and all those virtuous qualities that constitute the really just and noble soul.

When you have acquired fixed notions on these subjects, endeavour to regulate your conduct by them, and do not let the opinion of the world, self interest, or all the powers on earth, drive you from that line of steady industrious, and honorable conduct, which your own judgment and conscience tell you is right, but be cautious, hear the opinion of other people with attention, weigh the matter well before you say yes or no—but when you have once said it, adhere most steadily to the opinion, so long as your judgment says you are right, but should you become convinced you are wrong, say so at once; any blockhead can say, " I am right," but it requires a man of sense to say, " I am wrong." With these short admonitions I will take leave of this subject, and proceed in the next letter to call your attention to farming and grazing, particularly as it is practised in your native country, where in all probability you will sometime return to enjoy the little farm, that is yet in reserve for you.

" ALBION."

LETTER SECOND.

> ——" Hail, patroness of health,
> And contemplation, heart consoling joys
> And harmless pleasures, in the throng'd abode
> Of multitudes unknown! hail rural life!"

My very dear Son,

In reading, or attending to discussions on agriculture, you will bear in mind, that every observation of a practical farmer, or the man of science, which is intended to promote improvement in the system of cultivating the soil, ought to be received in good part, by those to whom it is addressed. When a man communicates his own ideas and experience to others, individuals can compare, appreciate, adopt or reject—none are controlled—

> " He travels and expatiates, as the bee;
> From flow'r to flow'r, so he from land to land;
> The manners, customs, policy of all,
> Pay contribution to the store he gleans;
> He sucks intelligence in ev'ry clime,
> And spreads the honey of his deep research
> At his return—a rich repast for me."

In order that you may form a more correct idea of cultivating a farm on a regular system, I will give you a plan of the farm upon which I passed the beginning of my life, making some deviations, in order that the system may be more complete—this farm contained six hundred acres of land, of a quality which was once considered of but little value, but by judicious management, has now become one of the most complete farms in the neighbourhood.

A tenant usually enters on a farm on the 6th April, but on all well regulated estates, the out going tenant is required, by the agreement with his landlord, to furnish the incoming one, at an earlier period, with various keeping for his live stock, and other accommodations, at a price to be settled by valuation; and the incoming tenant is likewise required to take the crop of fall-grain, and all the grass seeds and clover, sown the preceding year, and some other property in like manner; which mode enables an incoming tenant, if he be a good farmer, to get the whole of his spring crop of grain into the ground, and also to have on the farm its full number of live stock, by the first of May, which on the above farm, was as follows:

360 Ewes, giving support to 400 lambs at $10 00			$3600 00
40 ewes, which had missed, having lambs, at $10 00,			400 00
200 Crone ewes, which had not had the ram the preceding season, at $7 00			1400 00
200 she haggets, at $7 00			1400 00
200 he do. at $10 00			2000 00
200 once shorn wethers, at $12 00			2400 00
1200 sheep, and 400 lambs,			$11200 00
20 one year old cattle at $25 00		$500 00	
20 two year old, at	$50,	1000 00	
20 three, do. do. do.	75,	1500 00	
20 four do. do. do.	110,	2200 00	
10 working do. do.	100,	1000 00	
10 Milch Cows,	100,	1000 00	
20 Calves to be raised in the course of the year.			
			7200 00
120 head of cattle.			
12 working horses at	$150	$1800 00	
2 hackney do	150	300 00	
3 one year old do	50	150 00	
3 two year old do	100	300 00	
			2550 00
20 horses, and three foals to be raised in the course of the year.			
20 hogs at $15			300 00
Carts, wagons, and other dead stock estimated at			1750 00
For seed, labour, household furniture, &c., and pocket money,			3666 66
			$26666 66

Or £6000 sterling, being ten pounds for each acre of land, the sum of money required, according to common estimations, for to stock and cultivate what is termed a convertable farm; but first rate grazing ground will require full double that sum of money per acre; indeed, during the French war, it was very common to put full forty pounds sterling worth of stock, upon each acre of ground, where the pasture was first rate—but then, graziers frequently made five guineas of each sheep, and fifty guineas of each oxen.

About the 1st of May, the pasture ground will take its full quantity of live stock, which on the above farm, was depastured as follows:

No. 8.—120 ewes, 160 lambs, and 10 yearling steers.

No. 9.—120 ewes, 120 lambs, and 10 yearling heifers.

No. 10.—120 ewes, 120 lambs, and 10 two year old steers.

No. 12.—200 she haggets, 10 two year old heifers, and 3 young horses.

No. 14.—200 h haggets, 10 three year old steers and 3 young horses.

No. 15.—20 ewes, 6 milch cows, 1 hackney horse.

No. 16.—20 ewes, 4 milch cows, 10 calves, 1 hackney horse.

No. 19.—100 once shorn wethers, and 10 four year old oxen.

No. 20.—100 once shorn wethers, and 10 working oxen.

No. 21.—100 Crone ewes, 10 three year old heifers and calves.

No. 22.—100 Crone ewes, 10 four year old feeding heifers.

No. 17.—6 working horses, and 10 hogs.

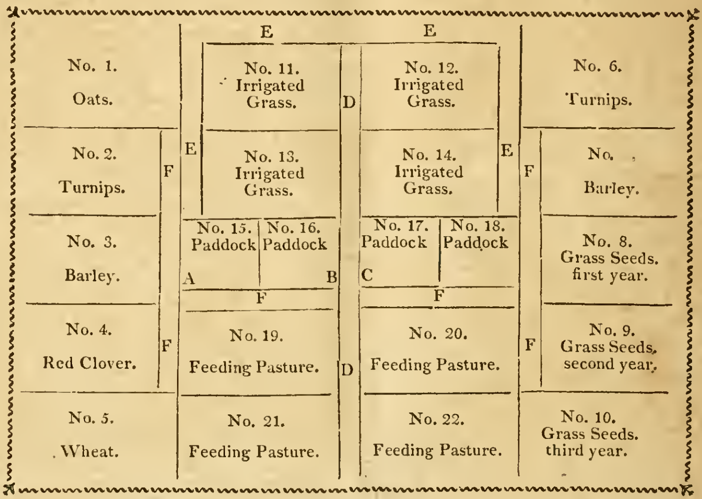
No. 18.—6 working horses, and 10 hogs.

By this arrangement you have a regular system of farming and grazing as practised in some parts of England, which shall be more fully explained in my future letters, and afterwards I intend to make some observations on live stock in general, and which kind of each breed, is to be preferred for those parts I have visited, during a residence of seven years in the United States.

"ALBION."

PLAN OF THE FARM.

NORTH.



18 enclosures of 30 acres each is	540 acres.
4 enclosed Paddocks of 15 acres each is	60 acres.
	600 acres.

No. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, are arable fields.

No. 11, 12, 13, 14, are grass grounds, which can be irrigated.

No. 15, 16, 17, 18, 19, 20, 21, 22, are pasture grounds which have never been plowed.

A. The dwelling house.
B. The grist, threshing and straw cutting mill.
C. Farm buildings.
D Original water course.
E. Water courses, cut to carry water to meadows.
F. Occupation roads.

FOR THE AMERICAN FARMER.

Virginia, February 14th.

Mr. Skinner,

The symptoms of a revival in the long laid spirit of the turf, together with several pieces, which have appeared in the publick prints, upon the improvement of our stock of horses, setting forth erroneous views of the subject, as I conceive, will be my apology for troubling you with the following remarks, for the American Farmer, should you deem them worthy a place in its columns.

Perhaps the novelty of the opinion, that the taste and passion for racing so far from contributing to, has retarded the progress of improvement in our horses, may attract some curiosity;—but, when it is stated further, to be an opinion deliberately formed, upon an experience of twenty year's breeding, commenced under the full impression, that the English race horse was the perfection of the species, I may hope for a patient reading, from all whose minds are open to conviction.

The essential points of the English turf horse, are, a thin and deep shoulder, narrow breast, delicate clean legs, long in the pasterns, a broad or wide hock well let down, and a thigh or haunch more remarkable for length than bulk. A long back more common than a short one, and a body oftener flat sided than round—and, finally, the taller the better, but not less than sixteen hands, for a first rate courser. This carcase and set of limbs is covered by a skin so thin and a coat of hair so fine, as to express the very veins as well as the muscles, beneath the delicate integument.

A long, low, slouching carriage, in every gait, follows as a consequence of the above form and proportions.—The very best calculated, truly, for a four mile heat, on a smooth course, but that it is totally unsuited to the road, I will use no other argument to prove, than one which all sagacious readers will have deduced already from the premises, if it were not established by the known general rule, that "a race horse is a stumbler."

Equally disqualified by the nature of his skin, is he for the harness—the slightest pressure producing a gall—and as unsuited are his long legs and limber pasterns to the frequently deep state, and irregular surface of our roads, that a horse of compact form and nimble movements, with a strong coat on his back and shoulders, and not within a hand of his height, will always be found more lasting and serviceable. Moreover, the running stock are frequently vicious and unmanageable, and very generally so shy and timid, as to render them in a great degree unfit for the purposes of war.—In England, the horses of this strain, are rarely used, but to contribute to the most ruinous and expensive of their pleasures*—and I am strongly inclined to the opinion, that the highest style cf the English race horse, which, it has been a very prevalent folly with us to take as our model, is a forced anomaly in the species, introduced and propagated by a prodigality of attention and expense, such as the enormous wealth of the nobility of England is alone able to sustain.

The noble animal to be cherished as the companion cf our manly pleasures and glorious achievements, should be of the form for power, docile and courageous in his temper, quick, firm and clear in his movements. These properties are found for the most part connected with roundness of contour and strength of articulation; with a texture of skin and strength of coat, which will bear the pressure of the saddle and the friction of the harness; and as far as my experience has gone, it is rare, that you find a horse of this description exceeding fifteen hands and a half high. All the finest horses in the world, may be traced to the Arabian stock. The English race horse is of Arabian descent, with the peculiar objections above described, but which I am happy in believing, the Author of Nature has kindly decreed shall never be made indigenous to our soil and climate.—The English blooded stock, tho' kept pure and uncrossed, essentially change their characters after a few generations in our climate, and manifestly for the better, as to every rational and useful purpose. The native Virginia horse of the third and fourth generation, from the light and washy figures of the *purest* English stock, become less tall, with more bulk shorter and stronger jointed, with a thicker and coarser coat; with these changes, there is a correspondent one in gaits and carriage. They are more active and sprightly in their movements, and better able to stand the vicissitudes of our climate. Our food, our climate, and our management are quite sufficient to account for these changes. Our maize, which forms three-forths of the grain fed to our horses, in the parts of the state below the mountains, (where eur best horses are found), is by far more nutricious than the oats of Europe, or any other grain used for the food of horses in any other country. Our young horses are more exposed to the weather, and when taken in hand are not put into close and warm stables, and clothed, as is generally the case in England.

It is a fact well known to the amateurs in this favourite animal of the Virginians, that we abounded much more in a fine race of horses for the saddle and the harness thirty years ago than at this day. This was precisely the period when the descendants of some of the best of the English stock which had been early imported into the colony, had become acclimated and fully naturalized—and I have but little doubt had we proceeded upon the rational plan of breeding solely with an eye to qualities for service, rather than the worse than useless properties for the turf, Virginia would now have had the most valuable race of horses in the world; but, unfortunately, about twenty five or thirty years ago, the late Colonel Hoomes, of the Bowling Green, of well known racing memory, and many others, availing themselves of the passion for racing, inundated the state with imported English race horses, well nigh to the extinction of the good old stocks of Janus, and Fearnaught, and Jolly Roger, and Mark Anthony, and Selim, and Peacock, and many other but little less tried and approved racers. The difficulty of getting a fine saddle horse has of late become a general remark; and when you do find one, with the exception of now and then a Diomed or Bedford cross, you rarely hear of any other of the late imported blood in his veins. The descendants of Cormorant, and Sterling, and Spread Eagle, and Seagull, and Buzzard, and Dare Devil, and Oscar, and Saltrum, and twenty others which might be added, are either extinct or still languishing through the probationary term of over pampered exoticks—such as have the stamina to go through the trial and become naturalized to corn and fodder in log stables, may form the basis of some future good stock; but, I dare say, we shall never hear of many of them again. Upon this subject, few perhaps, have had more experience than the author of this communication; having laboured under the racing mania for a term of years, that almost reduced him to a race of worthless garrans, though none of their distinguished dams cost him less than a hundred guineas a piece, and were certified for, through an uncontaminated succession of famous English ancestors down to the Godolphin Arabian. Fortunately, however, about twelve years ago, I became convinced of my delusion, and since I have been endeavouring to get back to the well known old stocks, and breeding exclusively with a view to useful qualities, the result has answered my most sanguine hopes.

One of your constant readers with a full share of Virginia fondness for horses.

FOR THE AMERICAN FARMER.

RATS.

In the year 1817, the rats were so numerous in my stable and carriage house, as to defy cats and traps, I was therefore compelled to try the effects of powder and shot, which was continued for several days without perceiving any great diminution of them, but to my surprise in fifteen or twenty days, not a rat was to be seen, and my hostler assured me he has not seen one since. In the year 1819, my barn, two miles from my house, became so much infested by them, that my overseer complained of the daily havock they were making upon the grain, &c. he was furnished with powder and shot, and directed to shoot as many as possible, but at the same time cautioned to wad his gun with wood or bits of woolen cloth; many were killed and others escaped wounded into their holes; it was observed that from these holes they were soon compelled to retreat, and invariably pursued by another. Now, as it is well known to all, that rats are very fond of flesh, I am induced to believe that attracted by the smell of blood, they are induced to attack the wounded and eat them—that this soon becomes a favourite food, and they are by this means taught to destroy each other, and the weaker soon become food for the stronger—be this as it may, I can assure you, my barn is entirely free from rats at this time, and has been so since the fall of 1819. By publishing this, it may induce others to try the experiment, the success of which I undertake to warrant.

Pohick, Fairfax County, Virginia.

FROM THE FRANKLIN GAZETTE.

FACTS RESPECTING CANALS.

The longest canal in Europe, is that of Languedoc, which connects the Atlantic Ocean with the Mediterranean. It is 192 miles long, and was began in 1666, and completed in 1680. The expense was 13,000,000 of livres equal to about 2,400,000 dollars. Louis XIV. the reigning monarch, contributed 5,000,000 of livres, and the province of Languedoc the remainder.

The name of the architect was Riguet, who, as a reward of his merit and talents, was presented by the king with his quarter of the profits for himself and his heirs.

The reservoir with which it commences, is 24 feet deep and 4000 paces in circumference and is supplied by a number of springs from the Noire, and rivulets.

This canal has 104 locks, of about eight feet rise each. In some places it passes over bridges of vast height; and in others it is cut through solid rocks for one thousand paces.*

" From the year 1758 to 1803, it is estimated there were nearly 60,000,000 of dollars expended on canals in Great Britain; the whole subscribed by private individuals. The length of ground which they occupy is 2896 miles. In this aggregate of length and expense, 43 canals, being private property, are not included, among which are three of the Duke of Bridgewater, Sir Nigel Boyer Grisley, and the Earl of Thanet. Of the acts passed for canals, ninety were on account of collieries opened in their vicinity; and forty-seven on account of mines of iron, lead, and copper, and for the convenience of furnaces and forges working on them.

"Eight of these furnaces, and twelve of these forges, in one county only, worked 24,824 tons of iron ore, and consumed 12,324 tons of pit coal annually; manufacturing in the same time 13,104 tons of iron goods. More than 100,000 tons of pit coal are annually taken down the Severn, for the Madely and Brozely Mineries, to the towns and villages in the neighborhood."

FULTON.

Means of rendering Wood, Linen, &c. &c. incombustible.

Mr. Benjamin Cook, of Baskerville House, Birmingham, in his experiments on the Alkalis, has discovered that all linen, cottons, muslins, &c. &c. when dipped in a solution of the pure vegetable alkali at a gravity of from 124 to 130, taking water at the gravity of 100, become incombustible. That all timbers become incombustible when saturated with a solution of alkali at the gravity of 140 to 150. He has two methods of saturating timber, first by letting the timber in the plank lie in the solution for several weeks, until the alkali has perfectly filled up the pores of the wood—but the method he prefers, is the use of a powerful machine, by which he extracts or forces out the sap, and then forces the alkali through the whole tree, thus filling up all the pores and rendering the tree incombustible; this he proposes to do as soon as the tree is felled, and before the bark is taken off. When the bark is in its best state he performs this operation in a

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**It may be safely asserted, that racing has put more of the estates of the English nobility to nurse, than any other single cause.*

* *Dobson's Encyclopædia, and Breck's Internal improvements.*

few hours, which, while it renders the wood incombustible, completely prevents the dry rot.

The solution of pure vegetable alkali which Mr. Cook prepares for securing from fire muslins, cottons, &c. &c. is as pure as the clearest spring water, perfectly free from smell, and will not discolour the finest cambrics or muslins. When so many dreadful accidents are continually happening from ladies' dresses taking fire, from bed and window curtains being set on fire either by accident or carelessness of servants, we cannot but consider this discovery as one of great importance to society.

For ship timbers, its value is enestimable, and not less so for all timber for houses and public buildings.

USEFUL INVENTION.

Mr. Edward Jakes, an English surgeon, has invented an apparatus by which the stomach may be emptied of poisons, that have been taken by accident or design. In cases where that organ has become unsusceptible to the action of emetic substances, the skilful application of this instrument will not fail to rescue the sufferer from impending destruction. Mr. J. has tested the efficacy of his invention by experiments upon himself, having relieved his stomach of ten drachms of laudanum which he had adventurously swallowed.—*R. I. American.*

HOGS.

An Ohio farmer recommends coals, as useful in fattening hogs. After giving his hogs a small quantity daily, say two pieces to each, about the size of a hen's egg, they discontinued rooting, were more quiet, and appeared to fatten faster. He omitted the coal a few days and they commenced rooting; he gave it again and they ceased to root. He supposes that the coal corrects that morbid fluid in the stomach which incites them to root deep in search of fresh earth.

Extract of a letter from Messrs. King & Gracie, dated Liverpool, January 1.

COTTON.

Sales in December, American, 25,420 bales; Brazil, 9,980; West India, 1,630; East India, 1,170; total 38,200 bales.

The total sales during the year 1822, were 462,805 bales, viz. 296,540 American; 128,830 Brazil; 26,300 West India; 11,135 East India.

Stock of Cotton in Liverpool.	1821	1822
American,	87,000	86,400
Brazil, &c.	45,900	42,500
East India,	27,100	18,500
West India,	6,850	5,600
Total,	166,850	153,000

Sales of tobacco in the month of December; Virginia leaf, 300 hhds.; stemmed, 247 do.; Kentucky leaf, 475 do; stemmed 42 do. Total, 1064 hogsheads.

FROM THE COMMERCIAL ADVERTISER.

THE PILOT'S SONG.

O'er the ocean silently
  Descends the gentle shade of even;
The moon has risen from the sea,
  Into the broad, and the deep blue heaven;
And from her airy wandering,
  Like a falling flake of snow,
The sea-bird rests her wearied wing
  On the billow's quiet flow.

Yet ere the day beam left the skies,
  And twilight veil'd the ocean o'er,
We saw from yon blue billow rise,
  Far, far and faint, our native shore;
How throbb'd each bosom at the sound—
  The exulting sea-boy's shout above,
As far, upon the wide waves bound,
  Burst into sight the land we love!

Athwart the wave, the beacon light
  Shoots brightly forth its twinkling ray,
And sweetly onward thro' the night,
  Its star-like lustre lights our way;
The heavens are bright, the wave is low,
  And mild winds gently bear us o'er
The azure waste—with morning's glow
  We tread again our native shore!

ARIEL.

New York, Jan. 31.

THE FARMER.

BALTIMORE, FRIDAY, FEBRUARY 28, 1823.

☞ The article in this paper on the culture of the Vine, from the Massachusetts Agricultural Repository, is the one referred to by General Swift in a late essay, and is worthy of attentive consideration. We rejoice to see that the subject attracts more and more attention, and hope before many years, to see our tables enriched and adorned with this exquisite fruit. There is, as we have recently understood, a very large and delicious grape in the Arkansaw Territory, which, we apprehend, would be a valuable acquisition, wherever it can be propagated. It is represented to be much larger than the fox grape, of golden colour, having but one seed in the centre of the fruit—the skin transparent and thin, as the outer coat of the Onion, and the fruit growing not in bunches, but separately—such is the description we have had of it, and we would thank any subscriber in that quarter who would give us a more particular account of it, with cuttings, when convenient to send them.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $7 25—Howard st. Superfine, $6 62½—Wharf, do. 6 12½—Wheat, white, $1 35 to 1 40—Red do., $1 32 to 1 35—Rye. 71 to 75 cents—Corn, 60 to 62 cts.—Oats, 35 to 37½ cents—Beef, live cattle, $5 to $5 50 per cwt.—Beef, 8 cents per lb.—Bacon, round, 10 to 11 cts.—Pork $4 50 to 5 50 per c lb.—6 to 8 cts. per lb.—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $8—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $5—Millet, $2—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons, 32 to 34 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, none in market—Herrings, No. 1, $3 62½ per bbl.—No. 2, $3 37½—Fine salt 80 to 90 cts. per bush.—Coarse, do. 75—Butter, 20 to 25 per lb.—Eggs, 25 cts. per doz.—Turkeys, 75 cts. to $1—Geese, 37½ to 50 cts. Chickens, $2 per doz.—Straw, $10 per ton—Hay, $16 to 17.

MARYLAND TOBACCO—Not in great demand, prices same as before.

FOR SALE

At Tuscarora on Carrolton manor near Frederick Town; the late farm of Robert Patterson, Esq. deceased, a variety of stock of the first quality and character, such as never was before offered at a public sale in Maryland; consisting of

The imported horse Exile, a description of which will be found below.

27 head of horses for draught and saddle.

1 female ass.

14 brood mares, principally of the Jersey blood.

19 colts, rising one to four years old, principally by Exile, and possessing strong marks of the sire.

1 waggon of narrow tyre.

1 ox cart.

1 horse cart, and harness complete.

4 yoke of fine oxen.

A quantity of milch cows.

A quantity of stock cattle.

A flock of sheep.

A wheat fan.

Two families, containing together ten persons, they will be sold in families, and not to be taken out of the state. They are orderly, and valuable people, and are not disposed of from any fault.

The sale will take place on Tuesday the 25th day of March next, and will begin at 10 o'clock in the forenoon. The condition of the sale will be made known by me at the time of selling, and the stock may be seen by an application to me, at any time before the day of sale, living on the premises.

MARCEY BRIGHY,
Manager.

Tuscarora, 23d Feb. 1823.

EXILE is a beautiful dark bay, sixteen hands high, will be four years old in May. He is admitted by the best judges who have examined him, to be the finest description of horse, ever imported into this country, as well on account of his breed, as his great bone and figure. The sire of Exile is considered one of the most splendid coach horses in England; his grand sire is the famous Yorkshire horse Mollineaux, which sold for 1100 guineas. It is the mixture of the Cleveland Bay, with the racing blood, which produces the old English Hunter; and it is the cross from them, that makes the Jersey horse more valuable than the southern; giving them bone, size, and high round action. The colour of these horses is confined to the various shades of bay, always with brown muzzles; and they combine the fine symmetry, smoothness of coat, and clean legs of the blooded. In fine it is now admitted in Europe, that this breed only can increase the size of the blooded horse, without taking from their activity, wind and figure.

AGENTS FOR THE AMERICAN FARMER.

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THE AMERICAN GARDENER.

CHAPTER V.

FRUITS.

Propagation, Planting, Cultivation.

LIST OF FRUITS.

310. GRAPE.—This is a very important article; and, before I proceed to treat of the culture of the grape-vine, I must notice the astonishing circumstance, that that culture should be almost wholly unknown in this country, of *fine sun*. I have asked the *reason* of this, seeing that the fruit is so good, the crop so certain, and the culture so easy. The only answer that I have received is, that the *rose-bug* destroys the fruit—Now, this I know, that I had a grape vine in my court-yard at Philadelphia; that it bore nothing the first year; that I made an arched trelis for it to run over; and that I had hundreds of pounds of fine grapes hanging down in large bunches.—Yes, I am told, but this was in a city; and amongst *houses*, and *there* the grapes do very well. Then, 1799, I saw, at Spring Mills, on the banks of the Shuylkill, in Pennsylvania, the Vineyard of Mr. *Le Gau*, which covered about two acres of ground, and the vines of which were loaded with fine grapes of, at least twenty different sorts. The vineyard was on the side of a little hill; on the top of the hill was a corn-field, and in the front of it, across a little valley, and on the side of another little hill, was a wood of lofty trees; the country in general, being very much covered with woods. Mr. LE GAU made wine from this Vineyard. The vines were planted at about four feet apart, grew upright, and were tied to sticks about five feet high, after the manner of some, at least, of the vineyards of France.—Now, are not these facts alone decisive in the negative of the proposition, that there is a generally prevalent obstacle to the growing of grapes in this country?—Mr. HULME, in his Journal to the West (See my Year's Residence, Paragraph 892,) gives an account of the *Vineyards* and of the *wine* made, at VEVAY, on the OHIO. He says, that, that year, about *five thousand gallons* of wine were made; and, he observes, what more can be wanted for the grape-vine, than *rich land* and *hot sun*.—Besides, is not the grape-vine a *native* here? There are many different sorts of grapes, that grow in the woods, climb the trees, cover some of them over, and bear and ripen their fruit. How often do we meet with a vine, in the autumn, with grapes, called chicken grapes, hanging on it from every bough of an oak or some other timber-tree! This grape resembles, as nearly as possible, what is, in England, called the *Black Cluster*; and, unquestionably only wants cultivation to give it as good a flavour. Does the *Rose Bug* prevent these vines from bearing, or from ripening their fruit? Taking it for granted, then, that this obstacle is *imaginary*, rather than real, I shall now proceed to speak of the propagation and cultivation of the grape-vine in the open ground of a garden; and, in doing this, I shall have frequently to refer to PLATE III.—The grape vine is raised from *cuttings*, or from *layers*. As to the first, you cut off, *as early as the ground* is open in the spring, a piece of the *last year's wood*; that is to say, a piece of a shoot, which grew during the last summer. This cutting should, if convenient, have an inch or two of the former year's wood at the bottom of it; but, this is by no means absolutely necessary. The cutting should have *four or five buds or joints.* Make the ground rich, move it deep, and make it fine. Then put in the cutting with a setting-stick, leaving only two buds, or joints, above ground; fasten the cutting well in the ground; and, then, as to keeping it *cool* and moist, see *cuttings*, in Paragraph 275. *Layers* from grape-vines are obtained with great ease. You have only to lay a shoot, or limb, however young or old, upon the ground, and cover any part of it with earth, it will strike out roots the first summer, and will become a vine, to be carried and planted in any other place. But, observe, vines do not *transplant well.* For this reason, both cuttings and layers, if intended to be removed, are usually *set*, or *layed*, in *flower pots* out of which they are turned, with the ball of earth along with them, into the earth where they are intended to grow and produce their fruit.—I have now to speak more particularly of the vines for my garden. PLATE I page represents, or at least, I mean it to represent, on the south side of the *Plats* No. 8 and No. 9, two trelis works for vines. These are to be *five feet high*, and are to consist of two rows of little upright bars two inches and a half by two inches, put two feet into the ground, and made of *Locust*, and then they will, as you well know, last *for ever*, without paint and without any kind of trouble. Now, then, bear in mind, that each of these Plats is, from East to West, 70 feet long. Each will, therefore, take, four vines, allowing to each vine, an extent of 16 feet, and something more for overrunning branches.—Look, now at PLATE III, which exhibits, in *all its dimensions*, the *cutting become a plant*, FIG. 1. The first year of its being a vine *after the leaves are off and before pruning*, FIG 2. The same year's vine *pruned in winter*, FIG. 3. The vine, in the next summer, with shoots, leaves, and grapes, FIG. 4. Having measured your distances, put in a cutting at each place where there is to be a vine. You are to leave two joints or buds out of ground. From these will come *two shoots* perhaps; and, if two come, rub off the top one and leave the bottom one, and, in winter, cut off the bit of dead wood which will, in this case, stand above the bottom shoot. Choose, however, the upper one to remain, if the lower one be very weak. Or, a better way is, to put in two or three cuttings within an inch or two of each other, leaving only *one bud* to each out of ground, and taking away, in the fall, the cuttings that send up the weakest shoots. The object is to get one good shoot, coming out as near to the ground as possible.—This shoot you tie to an upright stick, letting it grow its full length. When winter comes, cut this shoot down to the bud nearest to the ground.—The next year another, and a much stronger shoot will come out; and, when the leaves are off, in the fall, this shoot will be eight or ten feet long, having been tied to a stake as it rose, and will present what is described in FIG. 1, PLATE III. You must make your trelis; that is, put in your upright *Locust-bars* to tie the next summer's shoots to. You will want (See FIG. 2.) eight shoots to come out to run horizontally, to be tied to these bars. You must now, then, in winter, cut off your vine, leaving *eight* buds or joints. You see there is a mark for this cut, at *a*, fig. 1. During summer eight shoots will come, and, as they proceed on, they must be tied with matting, or something soft, to the bars. The whole vine, both ways included, is supposed to go 16 feet; but, if your tillage be good, it will go much further, and then the ends must be cut off in winter.—Now, then, winter presents you your vine as in *fig. 2.*; and now you must *prune*, which is the all-important part of the business.—Observe, and bear in mind, that little or no fruit ever comes on a grape-vine, except on young shoots that come out of wood of the *last year*.—All the four last year's shoots that you find in *fig.* 2, would send out bearers; but if you suffer that you will have a great parcel of *small wood*, and little or no fruit next year. Therefore, cut off 4 of the last year's shoots, as at *b*. (*Fig.* 3.) leaving only *one bud*. The four other shoots will send out a shoot from every one of their buds, and if the vine be *strong*, there will be *two bunches of grapes* on each of these young shoots; and, as the last year's shoots are supposed to be each 8 feet long, and as there generally is a bud at, or about, every half foot, every last year's shoot will produce 32 bunches of grapes; every vine 128 bunches; and the 8 vines 512; and, possibly, nay, probably, so many *pounds* of grapes! Is this incredible? Take, then, this well known fact, that there is a grape vine, a single vine, with only *one stem*, in the King of England's Gardens at his palace of Hampton Court, which has, for, perhaps, *half a century*, produced on an average, annually, *a ton of grapes*; that is to say 2,240 pounds, Avoirdupois weight. That vine covers a space of about 40 feet in length and 20 in breadth. And your two trelises, being, together, 128 feet long, and 4 deep, would form a space of more than half the dimensions of the vine of Hampton Court. However, suppose you have only a *fifth part* of what you might have, a hundred bunches of grapes are worth a great deal more than the annual trouble, which is, indeed, very little. *Fig.* 4 shows a vine in summer.—You see the four shoots *bearing*, and four other shoots coming on for the next year, from the butts left at the winter pruning, as at *b*. These four latter you are to tie to the bars as they advance on during the summer.—When winter comes again, you are *to cut off the four shoots that sent out the bearers during the summer*, and leave the four that grew out of the butts. Cut the four

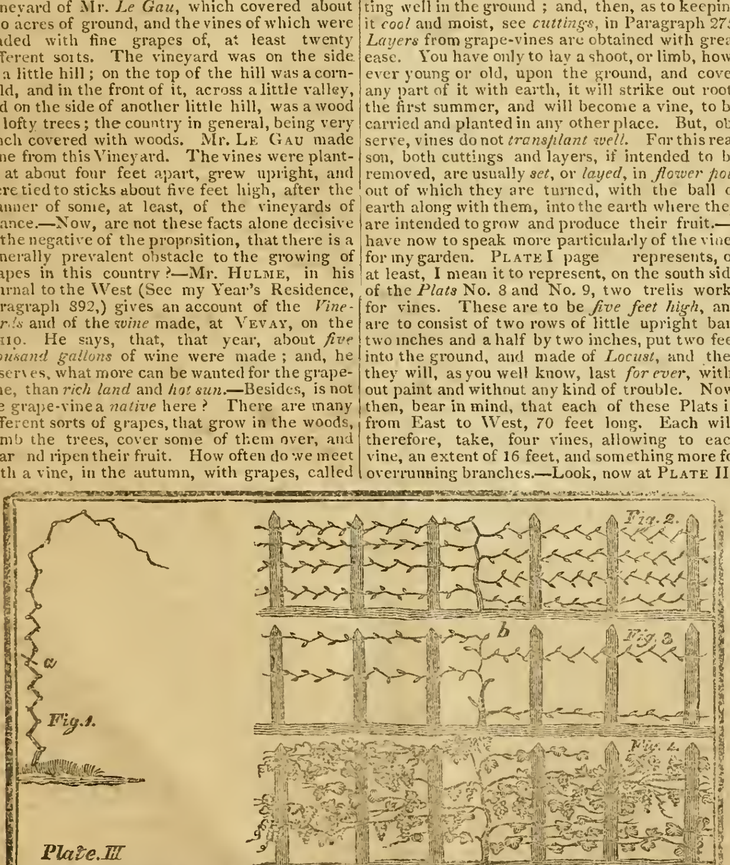

Plate. III

old shoots that have borne, so as to *leave but one bud at the butt.* And they will then be sending out wood, while the other four will be sending out fruit. And thus you go on year after year for your life; for, as to the vine, it will, if well treated, outlive you and your children to the third and even thirtieth generation. I think they say, that the vine at Hampton Court, was planted in the reign of King William. During the summer there are two things to be observed, as to pruning. Each of the *last year's shoots* has 32 buds, and, of course, it sends out 32 shoots with the grapes on them, for the grapes come out of the 2 first fair buds of these shoots. So that here would be an enormous quantity of wood, if it were all left till the end of summer. But, this must not be. When the grapes get as big as *peas*, cut off the green shoots that bear them, at *two buds distance* from the fruit. This is necessary in order to clear the vine of confusion of branches, and also to keep the sap back for the supply of the fruit. These new shoots, that have the bunches on, must be kept tied to the trelis, or else the wind would tear them off—The other thing is, to take care to keep nicely tied to the bars the shoots that are to send forth bearers the next year; and, if you observe any little *side shoots* coming out of them to crop these off as soon as they appear, leaving nothing but the clear, clean shoot. It may be remarked, that the butt, as at *b*, when it is cut off the next time, will be *longer by a bud.* That will be so; but, by the third year the vine will be so strong, that you may safely cut the shoots back to within six inches of the main trunk, leaving the new shoots to come out of it where they will; taking care to let but *one* grow for the summer. If shoots start out of the main trunk irregularly, rub them off as soon as they appear, and never suffer your vine to have any more than its regular number of shoots. As to *cultivation of the ground*, the ground should not only be deeply dug in the fall, but, with a fork, two or three times during the summer. They plough between them in Languedoc, as we do between the Indian Corn. The ground should be manured every fall, with good rich manure. Blood of any kind is excellent for vines. But, in a word, the tillage and the manuring cannot be too good. All that now remains is to speak of the *sorts of grapes.* The climate of this country will ripen any sort of grape. But, it may be as well to have some that come *early.*—The *Black July* grape, as it is called in England, or, as it is called in France, the *Noir Hatif*, is the earliest of all. I would have this for one of my eight vines; and, for the other seven I would have, the *Chasselas*; the *Burgundy;* the *Black Muscadine;* the *Black Frontinac;* the *Red Frontinac*; the *White Sweet Water;* and the *Black Hamburgh*, which is the sort of the Hampton-Court Vine.—In cases where grapes are to be grown against houses, or to be trained over bowers, the *principle* is the same, though the *form* may differ. If against the side of a house the main stem of the vine, might by degrees, be made to go, I dare say, a *hundred feet high.* Supppose 40 feet. In that case, it would be *forty* instead of *four;* but, the *side shoots* or alternate bearing limbs, would still come out in the same manner. The stem, or side limbs, may with the greatest ease, be made to accommodate themselves to windows, or to any interruptions of smoothness on the surface. If the side of the house, or place, be not very high, not more than 15 or 20 feet; the best way is to plant the vine in the middle of your space, and, instead of training an *upright* stem, take the two lowest shoots and lead them along, one from each side of the plant, to become stems, to lie along withing six inches or a foot of the ground. These will, of course, send out shoots, which you will train *upright* against the building, and which you will cut out alternately, as directed in the other case.

311. HUCKLEBERRY.—It is well known that it grows wild in great abundance, in many parts, and especially in Long Island, where it give rise to a *holiday* called *Huckleberry Monday.* It is a very good fruit for tarts mixed with Currants; and by no means bad to eat in its raw state.

312. MADEIRA NUT.—See Walnut.

313. MEDLAR. A very poor thing indeed. The Medlar is propagated by grafting on *crab*-stocks, or pear-stocks. It is, at any rate, especially in this country, a thing not worthy of a place in a garden. At best, it is only one degree better than a *rotten apple.*

314. MELON.—See Melon in Chapter IV.

315. MULBERRY.—This tree is raised from *cuttings* or from *layers.* See Paragraphs 275 and 277. The *White Mulberry*, which is the finest, and which the Silk worm feeds on, grows wild, and bears well, at two miles from the spot where I am now writing.

316. NECTARINE.—As to propagation, planting and cultivation, the Nectarine is, in all respects the same as the *peach*, which, therefore, see. It is certainly a *finer fruit*, especially the *Violet* Nectarine; but, it is not grown, or, but very little in America. I cannot believe, that there is any insurmountable obstacle in the way. It is grown *in England* very well. The *White French* would certainly do here; and it is the most beautiful of fruit, and a greater bearer, though not so fine in flavour as the *Violet.* The *Newington*, the *Roman* are by no means so good. I would have in the *Garden* three trees of each of the two former.

317. NUT.—Grows wild. Not worthy of a place in the Garden. Is propagated, and the fruit preserved, like *Filberd*, which see.

(To be continued.)

HESSIAN FLY—DISEASES OF WHEAT &c.

Sharron, Bucks County, Penn. 28th Jan. 1823.

John S. Skinner, Esq.

Dear Sir—In the American Farmer vol. four page 183, you have published a letter signed Philip Thornton, in which he says, "enclosed you will receive a few blades of wheat, and by examination, you will find that a deposite of eggs has been made by the fly, in a mode not heretofore mentioned by any one."* If the writer means, (as I presume he does) the Hessian fly (Cecidomyia destructor, of Say;) I beg leave to refer him to a letter of mine addressed to Robert Vaux, Esq. dated 1st February 1820, and published No. 23, in the second volume of your work, page 180; which, I believe, to be the first publication of the true deposite of that destructive insect, and you will find its whole history traced, and as I conceive the only way of guarding against its ravages pointed out, in two papers which I read before the Agricultural Society of Bucks county, dated 1st February, and 1st June 1821, also published in the American Farmer volume 3 page 187 and 213: I beg leave, also to refer your readers to them and to a paper that was written by Doctor Isaac Chapman, and a paper published in the same volume page 166, &c. My own observations were made without knowing any thing of the Doctor's discovery, as he had never made it public. I however, have no intention of detracting from the merit of any one, but wish things to appear as they really are.

I will now call the attention of Agriculturists to another insect, very destructive to the wheat crop; which I discovered in the spring of 1821, when searching after the Hessian fly. I have not yet completed its history, but have ascertained, that it has three broods or generations in each year; the larva (small worm) of the first brood is found (in this climate) about the first of May in the cavity of the culm, near the root, where it causes an enlargement of the stem and the plant declines as if affected by the fly—the second brood in June is lodged above the several joints in the cavity of the straw; this does not entirely destroy the stalk, but very materially injures its yield—the third brood is found among the plants that spring up in the stubble fields, or early sown crops in the fall, and lodged in the manner of the first brood.

I acknowledge the receipt of the Senna seed of South Carolina, which you so obligingly sent to me; for which I tender you my grateful thanks. I shall be further indebted to you for a sample of the Egyptian Millet, mentioned by Mr. Herbemont; but, from his description of it, I am inclined to believe, that it is the same plant which is cultivated in some some parts of our western country, as a substitute for chocolate, and is there called "chocolate corn."

I send by this mail a newspaper, in which is published a communication that I made to the Agricultural Society of Bucks, relating to insects, &c. Your's respectfully,

JAMES WORTH.

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* The supposed peculiarity in this case was the circumstance of finding the eggs deposited in the membraneous substance of the blades midway between the edges and the centre, and invariably nearest to the extremities or points of the leaves; whereas, the deposite of the Hessian fly, have uniformly been deposited, and observed to be near to the stalks: the injury noticed by Mr. Thornton, only affected parts of the blades; whereas, the Hessian fly is chiefly destructive to the stalks.—Edit. Am. Farmer.

Observations on INSECTS, with a view to arrest their destructive ravages, by JAMES WORTH, read before the Agricultural Society of Bucks County, 29th July, 1822.

To the Members of the Agricultural Society of Bucks County.

Gentlemen—I may be considered as trespassing on your patience in addressing you at this time, or perhaps it would have been more consistent with the rules of the Society, that I should have communicated my ideas through the Committee on Entomology, as my observations will chiefly relate to insects; but as you are all so deeply and immediately interested in the case, I have chosen the present course, and I now ask your solemn attention.

Entomology or the science of insects, is I believe, admitted to be very defective in its most essential part; that is, an acquaintance with the habits of insects. It is with insects as it is with man and all other things in nature: it is their use, or works, or character that is the primary object. What care we for the portrait of a man, unless for some great or good work that he has done, or the relation in which he stands to us? The print respecting the celebrated English Ox, is indeed a valuable print, but it is only valuable as it shows the essential points of a breed of cattle most easily fattened, and yielding beef of the finest quality. Now what interest have we in the form or size, or color of an insect, other than to describe a thing that has done to us certain benefit or injury. I bring this matter before you in order to induce a proper examination of those insects that are so detrimental to the agricultural interests: for when we ascertain the parent, manner and place of depositing the progeny, and general habits of insects, it is no difficult task to destroy, or so cripple them as to render them harmless to our crops; and I know of no way in which we can be more useful to our fellow beings, and better promote our own interests (in a pecuniary point of view,) than to remove such pests.—But it is said that man is to govern, and not to destroy any part of the animal creation, further than his immediate necessities require. I would have subscribed to this doctrine in the first state of things, for then all were rightly balanced; there was a perfect adjustment of every part, and therefore each species held its proper rank in the great scale of creation; but how do matters now stand? It would require volumes to explain them fully, and would be deemed preposterous in me to make the attempt; but allow me to make a few remarks as regards the insect tribe. It must be obvious to every man of observation, that many species of insects have increased to an alarming extent, and unless timely checked, I verily believe that they will be the means of producing a famine in our land, and we know not how soon that dreadful event may take place; already we see our fruit and forest trees declining—our wheat crops nearly cut off, corn very uncertain, clover is failing, timothy affected, and even that hardy plant commonly called buckhorn, has not escaped, and our other crops will probably in turn, share the same fate. Look at the immense damage sustained the present season. If a fellow creature takes from us a single bushel of grain, we pursue him to the utmost rigor of the law, and yet, oh! shameful to relate, we suffer this lower grade of animals to rob us of a great portion of our store. This thing has come upon us in consequence of our wanton destruction of the feathered tribe, which is that link in creation that seems intended to keep the insect race within proper bounds, and we are left to do a work which the birds would have done for us; or rather, we are now suffering an evil that would never have happened to us. Then let us at once reform, by reversing our course of action.—The insect tribe has got the ascendancy by man's misconduct, and it devolves upon the present generation to restore the equilibrium. The increase of birds will greatly assist in the work, and I earnestly intreat that some immediate measures may be taken for their preservation. I do think that if every member of the society would absolutely prohibit gunning on his lands, it would have a good effect in discouraging a practice that, to say the least of it, is disgraceful to our nature. I rejoice to learn that in some parts of our country, the landholders have associated for that express purpose, and I understand that an association of that kind exists in Montgomery County, not far from the city of Philadelphia, where the inhabitants were almost as much annoyed by gunners as by insects: much good has been produced. Now I trust that our society will not be behind hand in this praise worthy business; and as it will not be entered upon through ill-nature, or with a view to lessen the enjoyments of any one, but as indispensably necessary for the preservation of our crops, in which the whole community are deeply interested, surely no man will be found so lost to a sense of duty and the dignity of his nature, as to oppose such salutary measures.

Do we not remember how the blackbirds formerly followed the plough in search of grubs? Alas! that faithful bird has almost disappeared. The woodpecker and other kinds, so diligent in guarding our fruit trees, are now scarcely to be seen; the little wren, so industrious about our houses and gardens, deserves our peculiar care; even the despised hawk, I have observed to be eminently useful in destroying field mice; indeed, almost every species claim our regard.

I would further recommend to the notice of the society, the common toad, as I am inclined to believe that it is very destructive to night insects. Snakes are also useful in feeding upon the vermin of our fields, and therefore such kinds as are harmless ought to be protected. I might also mention the ground mole.

I will now call the attention of the society to the following insects, to wit:

The Hessian fly, so destructive to our wheat crops.

A little worm found in the lower part of the stalks of wheat and rye, in spring and fall, and about the joints in June.

A worm in the straw above the upper joint, which causes the early change of color of the ear, assuming a ripe appearance, but producing no grain.

A species of louse or aphis, that infest grounds and feed upon the roots of wheat, corn, young trees, &c. and do immense damage.

A species of louse that feed upon cabbage, young leaves of peach trees, &c.

Worm that attacks the roots or lower part of the trunk of peach trees.

The white grub that infests our grounds in great abundance.

Cut worm or black grub, that harbors in the ground and cuts off the young plants early in the season. There is another black grub that appears later, at the roots.

Pea fly, that infests our peas.

Curculio, that produces a worm which enters into several kinds of fruit, and causes the dropping before ripe, particularly the plum, nectarine, apricot and peach.

Rose bug, so injurious to that beautiful flower, the rose, and some seasons is destructive to grapes, strawberries, early cherries, apples, peaches and other fruit.

Caterpillar, that feeds upon the leaves of trees and through carelessness often blasts our prospects of fruit.

Canker worm, that infests currant and gooseberry bushes, and quince and other kinds of trees.

Small insect that appears like scales or spots on the trunk, and sometimes extending to the branches of young trees.

A species of spider or webbing insect that causes the salivary disease of animals feeding upon grass or hay infested with it.

Very small black fly that attacks young plants, perhaps it may be the same, or similar to the turnip fly, for I have not examined it sufficiently close to describe it particularly.

Striped bug so destructive to cucumbers, &c.

Ash colored bug that annoys squashes, pumpkins, &c.

The Hessian fly I have already investigated, and described to the society; but allow me to add a calculation of its astonishing increase. There are three complete broods in every year, and each fly deposites from one to two hundred eggs: take the smaller number and say that one fly deposites 100 eggs, which call the first brood; these 100 each bringing forth 100, makes the second brood amount to ten thousand; and each of them producing 100, the third brood will amount to one million—that is, a single fly is increased to a million in one year; or if, as is very probable, that the deposite is two hundred fold, then the increase amounts to eight millions in one year. Now if they were to go on in this way, all our wheat and rye, and barley would be but a morsel to them. Fortunately, however, they have several enemies, and particularly the June brood; but this may not always be the case, and therefore it behoves us to look to the matter before it be too late.

I have also mentioned the pea fly, but I will further observe that on planting my peas the past season, I poured them immediately from where they had been kept closely covered, into a vessel of water, and letting them remain a little while, the flies rose to the surface of the water, and none could escape after being once wet. I think it did not take above fifteen minutes to kill them all.

The peach worm is generated by an insect of something of a wasp-like appearance, and about seven eighths of an inch long. The male has a dark or black body, with four narrow rings of yellow around it—some yellow about its mouth and thorax—wings transparent or little inclining to yellow, edged and streaked with black—a small bunch of down at posterior, appearing through a glass like a feathered tail. The female is of a beautiful purple or mazarine blue, all over except a rich orange stripe about one eighth of an inch broad, extending around the body with a little interruption, under the belly; and the inner edges of the wings appear light or transparent—the body is somewhat shorter, but fuller than that of the male—deposited eggs on the third day after appearing in the winged state, probably owing to its confined situation in a glass tumbler; the eggs are just discernable by the naked eye, are oval and of a dull yellow color, and were attached to the side of the tumbler with a gluey substance, so that I should suppose that the deposite is most likely, generally made somewhere on the trunk of the peach tree; but this is a matter for further investigation. I have furnished Thomas Say, Esq. with a pair of the insects in living state, and he will give them a proper examination, and if not already noticed by some Entomologist, he will furnish a scientific description of them.

The white grub has done great injury this season to our grasses, grains and roots, and has increased within the last several years, to an extent that ought to alarm us. Indeed such is the present number, that should all arrive to the winged state, and bring forth a full progeny, we may calculate that there will be an increase of at least one hundred (and perhaps several hundred) fold, to feed upon our next year's crops, and if the season should prove as dry as the present, every description of plants may be devoured by this single species of insects.

The curculio might, in a great degree, be destroyed by suffering hogs to pick up the fallen fruit, in which the larva is lodged.

The rose bug may be destroyed by early attention without much labor: it first attacks the rose, having a preference for it; then, as soon as the bugs are seen to collect upon the rose, take a vessel about half filled with water, (a large tin cup is a handy thing) in one hand, and hold it under the infested flower, and with the other hand disturb the bugs, and they will instantly fall into the water, and cannot extricate themselves, and in that way I have collected great quantities of them, which by throwing into hot water were in a moment destroyed; and I am sure that half an hour so spent, for a few mornings, would entirely rid us of that evil.

The caterpillar and canker worm I need say but little about, as by a little attention the whole of them on a farm may be destroyed in less than half a day, by a single individual.

The other insects mentioned, I hope at some future day to be able to give a better account of. It seems indeed, an arduous undertaking, but if all who are concerned would take a share, the task would become light. May I calculate on the zealous co operation of every member of the society? But it is said that man is a fallen creature, and doomed "to eat bread in the sweat of his race," and to be annoyed during his pilgrimage here below. I fully believe such to be our situation; nevertheless, I have the most perfect reliance that when man faithfully exercises the powers with which he is endowed, he is restored to his pristine state, and that he has as complete "dominion over the fish of the sea, and over the fowls of the air, and over every living thing that moveth upon the earth," now, as he ever had; that he is still Lord of this world. All the evils that are upon us are of our own doings, and the moment we turn from the error of our own ways, we shall be blessed with the proper remedy. But we are not to be mere idle spectators, we must devise all possible means of working: we must be up and doing, and there is a part for each one of us to perform—every member of the society can and ought to do something; those who do not like to write, let them speak, or take their own way of communicating their knowledge; and in that way I am sure they will be useful. And remember that "your own knowledge is as nothing unless others know you to possess that knowledge; besides if you possess knowledge that others need, (and I have no doubt but every one of you do,) is it not your bounden duty to offer a supply? And so far from detracting from your own store, the very act of imparting would tend to your improvement. Thus it is, my friends, that I have so freely, on all occasions, tender my little stock; and although not of much value, yet it has afforded myself both pleasure and profit.

FROM POULSON'S AMERICAN DAILY ADVERTISER.

COLLECTANEA.

He reaped the field, and they but only gleaned.
Dryden.

CATS.

These animals have met with very different receptions among various nations. By the Egyptians they were worshipped as deities, and, at, death, were embalmed and interred in catacombs. If the statement of Herodotus is correct, when the house of an Egyptian took fire, he first hastened to convey his cats to a place of security, and afterwards looked about for his wife and children. In some cities of Europe, on the contrary, it was the custom, on St. John's day, to burn a cat, with all the honors of an *auto da fe*. Buffon was of opinion, that the cat was "a selfish and faithless servant, that conformed to some of the habits of society, without being imbued with its spirit, and whose predatory and robberlike disposition had not been totally eradicated, but only modified, by a careful education, into the flattering stupidity of a knave." Rosseau preferred the cat to the dog, because the one has preserved its freedom and independence, while the other has willingly entered into bondage.—Petrarch entertained the most lively affection for a cat, the companion of his solitude. Mahomet preferred cutting off the sleeve of his robe to disturbing the repose of his favorite Grimalkin, that had fallen asleep upon it. Madame Helvetius had a cat who, after a long attachment, in which puss showed some traits uncommon in the feline race, fled to the cemetery of its mistress, and expired upon her grave. Poets have sung their praises, and Artists devoted their talents to them; amongst the latter, Godfrey Mind, of Switzerland, is distinguished; he painted them in every situation and attitude, and with such astonishing skill and fidelity as to have been called the *Raphael of Cats*.

Whilst these and others have been remarkable for their love of this animal, others have evinced an unaccountable antipathy, and there are some to whom the sight of a cat would occasion the greatest terror, sometimes producing convulsions.

From the same.

COAL.

Looking into an old book, entitled "A new Display of the Beauties of England," which, besides a description of the public edifices, royal palaces, noblemen's and gentlemen's seats, &c. &c. &c. contains a body of information as to the topography, geology, &c. of the different counties, I find the following remarks as to the coal of Staffordshire:

"Besides plenty of turf and peat, for firing, this county yields *three* sorts of coal, which are distinguished by the names of Pit Coal, *Peacock* Coal and Canal Coal. The Pit Coal is dug chiefly in the South part of the county at Wednesbury, Dudley and Sedgley, not far from Wolverhampton. The *Peacock Coal, so called from its reflecting various colors, like those of a Peacock's tail, is found at Henley Green, near New Castle Under-Line, and is better for the forge than the kitchen*. The Canal Coal, which give a very clear and bright flame, derives its name from Canwil, an ancient British word for candle."

It is said, also, that under the surface of the ground are found yellow and red ochre, pipeclay, potters' clay, fullers' earth, blue brick earth, (the same of which the Romans made their urns) fire-stone, lime-stone, iron ore, (of superior quality,) copper ore, lead ore, blood-stone, alabaster, marble, &c.

As the conformation of the earth is found to be nearly the same in different countries, so that when we meet with one characteristic we may reasonably expect to find the same concomitants which usually attend it elsewhere, may we not expect to find, near our beds of *Peacock Coal*; on the head waters of the Schuylkill and Lehigh, the other kinds of Coal, Earths, Minerals, &c. which are in Staffordshire?

If the argument from analogy will hold, it ought to encourage those who are engaging in the Coal trade, or are proprietors of lands in those Districts, to dig deep and explore wide—perchance they may find other species of Coal, and Earths and Minerals, which will increase their own wealth and add to the prosperity of our state and city. As yet, their researches seem to be satisfied with one discovery, eminently important indeed, but they have been limited to a few spots, and merely to the surface. A. B.

TO THE EDITOR OF THE AMERICAN FARMER.

Philadelphia, *Feb.* 26, 1823.

MAPLE SUGAR, AND EARLY CORN.

Dear Sir,

I have directed some Susquehanna County Maple Sugar, and Indian Corn, to be sent to Mr. Bailey of this place, for you. I am informed that they will go by the stage.

Of the sugar, upwards of an hundred tons have been made in a season, in Susquehanna county. Where care is taken in the making of it, I think the maple sugar, much superior to that which is made from the cane. It would be a profitable article of domestic produce, were it properly attended to. But I regret to see my neighbours in clearing their land, pay no respect to the superb tree which produces it; but destroy it with the rest of the timber.

The corn is a very early kind—it should be planted in rows, about three feet apart—the plants a foot from each other in the rows It is short, not growing higher than five or six feet. The ears, which are small, grow near the ground. A person accustomed to your southern corn, on looking slightly at a field of this, would think it of little value; but on examining it closely, and counting the number of ears in a short space, would have reason to alter his opinion.—However, I am not certain that it will answer well in your climate; your seasons may be too warm and dry for it. It requires a good and deep soil. I have raised at the rate of one hundred and thirty six bushels of it on the acre in Susquehanna county—but with some persons in the vicinity of this city, to whom I gave it, and who raised it last season, it did not turn out well.

I am, Sir,
Your very obedient servant,
R. H. ROSE.

FROM THE HERKIMER PEOPLE'S FRIEND.

MAPLE SUGAR.

Fairfield, *May* 29, 1822.

Dear Sir,

An improvement in the manufacturing of sugar from the maple, is loudly called for, from the negligent manner in which the business is generally managed. For many years have I been exerting myself to effect such an improvement, and by an experience of seven years in my present method of operation, during which time I have been able to improve the quality of my sugar every year, my sample will now compare, according to the opinion of the most respectable judges, with any that is made from the juice of the cane.

According to the notice inserted in the 'Plough Boy last year, I manufactured in the season of 1821, six thousand pounds of sugar from the sap of the maple. The present season I have made at the same factory, about six thousand and ninety pounds, of the best quality of sugar—as will appear to those who have never seen it, when informed, that last year and the present, my sugar sold, and is selling from ten to twelve dollars per cwt. and it is preferred by many of our most respectable families, to the most Muscovado.—Many samples have been sent abroad both to New England and New York.

Presuming that the result of my experience on this important subject, would be pleasing to you, and I doubt not useful to the public, I thought proper to add a few hints respecting my sugar factory. The subject is important, because it is undoubtedly true, that the sap of the maple is the purest sweet known, if unadulterated by the hand of the manufacturer. About three fourths of my sugar is stirred off dry and packed into dry casks, and thus keeps in perfect order, without being subject to any drain of molasses; the remaining 1-4, is drained with clay in the heat of summer, and is then nearly equal to lump sugar. This circumstance shows that sap is less adulterated than the juice of the cane, for all the West India sugars are subject to drain of molasses of from 1 3 to 1 4 (see Edwards' "West Indies.')

My sugar lot is in the town of Norway, (Herkimer county) and encloses about fifty acres of ground, on which I have set two thousand pails—to the largest trees 4 pails, to some 3, to others 2, and to many 1; my whole number of trees in use about eleven hundred, making an average crop from a pail of 3 lbs. and from a tree 5¼, which is considered a fair estimate for this latitude. The labour required to manage my factory is much less than would be imagined, and without a knowledge of the plan might exceed belief. I have but one place for evaporating, where all the sap is collected; and all necessary house room prepared to store pails and reservoirs through the year. After becoming acquainted with the situation of all the trees for use, roads were cut in all directions, nearly parallel to each other, and so near that no tree stands more than 100 feet from one of those roads. By these means the labour of carrying the sap by hand is only the same as if the number of trees stood on a space of two hundred feet diameter. To gather the sap, light one horse sleds are used, with tapering casks fastened to them 6 feet in length, 2 feet at one end, and 20 inches at the other in diameter, and containing about a hogshead.—When drawn to the reservoir, the sap is conducted to it in one minute without moving the cask; and in a similar way the sap is conducted into the evaporators, as need requires.

The one horse teams are usually managed with two hands to each, and in this way each team will load and empty once in every thirty minutes. When the sap has been plenty, 25 loads have been gathered with one team and two hands in a day. For the two last years, two horses have drawn all the sap from the said 2000 pails, though an extra sled has been kept in case of necessity. Four evaporaters are provided, made of sheet iron, weighing 3 lbs. to the square foot, each of which is about 9 feet in length, 6 feet wide, and 12 inches deep. The plan of setting them is simple; the bottoms being flat, two walls are built nearly equal to the width of the evaporators or pan; a flue is made in the centre, so that no fire is permitted to strike the sides of the pan, but its whole force comes upon the bottom only. Last season three of these pans were used, and the present only two were in use, to evaporate the 6090 lbs. in consequence of the moderate flowing of the sap.

According to the calculation which I have made, sugar makers may venture to set seven or eight hundred pails to one of these pans, provided dry wood be procured, and the fires kept up through the night, in case of extraordinary runs, which, however do not often happen. I have used from four to five cords of wood to a thousand pounds of sugar made, which is cut and put under cover, a year before used.—The above plan of evaporating is well worthy of consideration by those who wish to improve the quality of their sugar, as it is acknowledged by all who have become acquainted with it, to be preferable to any other in use. Its prominent advantages are—1st. It carries on the evaporation without the least particle of waste, as you cannot raise a fire sufficient to cause the sap to overflow. 2d. No heat coming upon the sides, the syrup comes down in all its purity without the scorching or burning, and without any smoke or ashes disturbing the surface, as in the common way. 3d. The ease and small labour of tending, and the advantage of building in the night; as a fire of large wood will evaporate 200 gallons, and sometimes more with perfect safety, while the tender may be enjoying sleep. When sap is boiled in cast iron kettles, it is impossible to preserve the purity of the sweetness in its natural state—but it will become adulterated and darkened, in proportion to the heat applied above the surface of the sap.—To this circumstance alone is to be attributed the unpleasant fact of maple sugar being so universally bad, especially in the color. It was first calculated that sugar making on so large a scale as I had adopted, would require six or seven hands; but incredible as it may appear, five hands managed my work last year with ease; and this season, from the moderation with which the sap has overflowed, four hands only have been employed. The total expense of fitting up the above works was about $750.

The evaporators are not removed during summer, fall and winter, but only turned bottom upwards and exposed to the weather. This is found to be the best way of preserving them; my oldest pan has been thus used eight years, and it is perfectly free from rust and unimpaired. Much more should be written to give you a full knowledge of my whole process of operation, and after all the theory, nothing but experience can enable a person to convert syrup into sugar. I trust, Sir, the time is at hand, when such improvement will be made in our manufacturing of maple sugar, as shall raise its value, and supercede in a great measure the importation of West India sugars into these northern regions, which so abound with maple sugar.

MOSES MATHER.

G. H. Feeter, Esq. Little Falls.

FROM THE MASSACHUSETTS AGRICULTURAL REPOSITORY.

ON GRASSES.

To the Recording Secretary.

Dear Sir—At your suggestion, that there might be some utility in publishing the result of some experiments made the past season upon the evaporation of certain Grasses, &c. in the process of drying or making for safe and useful preservation; I herein inclose the same to you for such disposition as you may think proper.

The great object of research seems to be, what is that admirable process of nature, (as yet too little understood,) by which vegetable life is sustained and promoted? And how can this be traced or pursued so as to allow the human skill and ingenuity the nearest approach to the wonderful perfection of the great design? That this may be usefully done—that it is indeed partly accomplished, and that we are in full progression to this effect, cannot be doubted. The discoveries and improvements in those sciences, particularly in Europe, which have a reference to the theory of agriculture, have of late shed such a light upon the subject, and these have been so followed up by practice and confirmed by experience, that the result is indeed most auspicious, and marks the present age as an era of improvement.

But the process of nature is indeed subtle and mysterious, and can only be unfolded to the most earnest and diligent inquirer.

An accurate knowledge of the elements which compose vegetable life, and different degrees in which they prevail in its formation, cannot be useless, in looking back for its origin and first principles. The tendency of most modern discoveries in relation to vegetation has been to shew the great prevalence of water in its composition. This has not only been made to appear by the analysis of plants, but it has to the astonishment of those who prosecuted these researches, appeared, that an acre of ground gave according to its humidity, from 2 to 4000 gallons of water to the atmosphere in a day by evaporation only. The operation of this element has appeared so extensive that it has led to the most delicate experiments, and induced some even to suppose it the sole source of vegetation.

A curious instance has been frequently published, of a willow inserted in a leaden vessel with a given quantity of earth, and supplied constantly with water; the willow thrived and acquired great growth and weight in a few years;—whilst on a subsequent examination of the soil, it appeared no sensible diminution had taken place.

It is observed by an ingenious writer,* to whom agricultural science is much indebted, "That although the mode in which manures operate on soils is not obvious to the senses as to be fully understood, there are three ways in which water promotes their improvement. It preserves a favorable degree of temperature; feeds by conveying nourishing substances; and so as a pure element, it is beneficial." To prove that water enters largely into the composition of vegetables, and is thus advantageous, the same writer observes:—"That plants cut green, and afterwards dried, lose by exsiccation 66 to 70 parts out of 100."

The loss of weight by drying will be found in this country to vary very essentially from what takes place in Scotland, especially as it respects different plants. But our hay is of necessity made lighter by the heat of our summer, as well as for the purpose of its being stowed in large bodies and tight barns.

It should be premised, that the time of cutting the several grasses, &c. in the following statement was the same as is usually practised by husbandmen in our state.

Of 100 lbs. of vegetables cured in 1822, the product was as follows, viz.

lbs.			lbs.
100 "	of Green white clover,	gave of hay	17½ "
100 "	of Red do.	gave	27½ "
100 "	of Herds' Grass,	gave	40 "
100 "	of Fresh Meadow,	gave	38 "
100 '	of Salt Grass,	gave	39 "
100 "	of Mixed, 2d crop on Eng. Rowan,		18¾ "
100 "	of Corn Stalks, gave		25 "
100 "	of do. out in milk with the ear,		25 "

It is to be observed, that the weight will vary from ripeness, and many other causes, such as wetness of season, shade, thickness of growth, &c.

I am, Sir, with respect, yours,

JOHN WELLES.

Dorchester, Oct. 1822.

CULTURE OF SWEET POTATOES.

Hopkinsville, Kentucky Jan. 30th, 1823.

J. S. Skinner, Esq.

Sir—In the American Farmer, of the 3d inst. I find an enquiry, as to the kind of manure best adapted to the raising of sweet potatoes, and the best kind of culture, to insure a great crop. I readily agree with the enquirer, that this is a most valuable vegetable, and has been too long very much neglected. Yet I make no pretensions to answer his enquiries on this subject; but only to state a few facts, giving a brief detail of my own mode of cultivating this root.

I will premise that any increase of crop was not ascertained by actual admeasurement, but only by the eye, when viewed in bulk, and a larger root for several years in succession, after my mode had been fairly tried.

The first step in the process, is to inclose the lot intended for your sweet potato crop to itself. Your ground is, of course, to be next plowed; and here I will remark, that for no crop is deep tilth more necessary. When your ground is thus prepared, throw it into ridges, three and a half feet apart, with a large bar share plough, causing the upper points of the two meeting furrows, to come within two or three inches of each other. On top of these ridges lay your plantings one foot apart, each planting forming a triangle with the two preceding, then cover them with a hoe, pulling up the earth from between the ridges. It is desirable to cover them with rich mould; if the planting is embedded in a clay covering, it does not vegetate so quick; consequently the root is more apt to perish. This ridge, when it is covered, should be as high as a large potato hill. This mode of putting in your crop, together with the subsequent culture, will be found, upon trial, to take far less labour than the usual method of making and planting in hills.—

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* *Sir John Sinclair.*

The chief of the tillage, until you come to hilling, may be done with a light one horse plough. But the greatest saving of labour is in gathering your crop; which is performed after throwing the vines in a line between the ridges, then with a plough, throwing one third on each side of each ridge on the vines. Nearly all the potatoes will be left in the remainder of the ridge, which are to be thrown in baskets, and conveyed immediately to your potato cellar, which ought to be uncovered every day until they are done sweating.

The chief advantage, however, which I promise myself is the subsequent use I make of my potato lot. Those who prefer the old mode of management, may still pursue it, and derive the same advantage in giving their ground an aptitude for the growth of this root. Nothing is necessary to insure an annual increase of crop, the seasons being equal, than as soon as you get your potatoes off the ground to turn in your hogs intended for slaughter, and there to fatten them, until they are ready for slaughter. I have known a good crop made where this plan had been pursued in a very dry season, when not a single neighbour, without it, made any.

If you deem the foregoing worthy of being presented to your correspondents, you are at liberty to do so.

Your's &c.

A. Z.

Note. You will perceive that I have not attempted any reasoning on the foregoing; no doubt, the chief benefit is by the deep rooting of the hogs, and consequent action of frost upon the earth—moreover, some manure is deposited.

FOR THE AMERICAN FARMER.

PRACTICAL QUESTIONS.

Mr. Skinner,

I have a choice lot of 15 acres in fine heart, but foul with blue grass and rib-wort—it was well ploughed last fall; my wish is, to put it down in September to wheat. I should be greatly obliged to any of your *practical* correspondents for advice, which doubtless might benefit many others, as well as myself, as to the most advantageous and œconomical crop, that may in the *interim* be taken from the lot in question, and which crop would also, at the same time, be a good preparative for the wheat crop, and not in any material degree lessen the strength of the ground? If there be no such advisable crop, I should be glad to learn what they deem the best and cheapest method of putting the ground in a clean tilth for wheat?

I wish also to be informed, whether Millet be thought a great exhauster when cut for hay—and if it may not be sown with safety and advantage, early in the spring?

A YOUNG FARMER.

Anne Arundel, February, 1823.

FAT CATTLE.

One of the finest lots of fat cattle has recently arrived in this city, perhaps, that has ever been offered in our market, It consists of 12 extraordinary steers, fattened by Mr. Monmouth Purdy, of Scipio, Cayuga County. We have been warned of the approach of these animals in anticipation, by the newspapers of villages through which they passed. These cattle have been purchased by Mr. David Marsh, and Mr Andrew C. Wheeler, of Fulton Market, and the beef will be offered for sale on Saturday the 8th of March. It s supposed they will weigh from 2500 lbs. to 3000 lbs. each; one pair for which the purchasers gave $500, is judged to weigh 6000 lbs. We understand that Mr Wm. Fink,[*] a name always delightful to the ears of the lovers of roast beef, says that he has never before seen 12 steers equal to these; and Mr. Purdy certainly deserves encouragement for his exertions to raise the character of western beef. When he first went into the western part of this state, the cattle raised in that region, were considered rather inferior; but such has been his success in improving the breed, and in fattening and driving them, that the butchers are now anxious to obtain supplies from thence. The cattle were driven 6 miles per day; and the inhabitants of two of the villages on the way, paid Mr. P. $30 respectively, as an encouragement for preseverance in producing such extraordinary fine animals for the market.—*Com. Adv.*

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[*] Already aware of the enterprise of this gentleman in the line of his business, and others in the State of New York—we are somewhat surprised that the offer of one of the most wealthy and respectable Farmers in Virginia has not been taken up—we allude to the offer to risk the sum of $500 that he would produce at the Maryland Cattle Show, in 1824, a bullock yielding a greater nett weight than any that could be produced at the same place, bred in the state of New York. We have no doubt that $500 would be given by Mr. Rusk, or some of our spirited victuallers here, for the prize beef, and surely the sum of $1000 for a single bullock, together with the honour of victory in an *useful contest*, would amply compensate for the expense and trouble of raising and bringing on the animal to Baltimore—the transportation of such an one from New York to this place, might be effected without a mile of land carriage. The Editors of the New York Statesman are requested to copy the original challenge from the American Farmer, that the spirited graziers and victuallers of that town and state may not plead ignorance of the oppertunity now presented of plucking if they can, another feather from the Agricultural cap of the "ancient dominion."—*Edit. Am. Farmer.*

AGRICULTURAL PREMIUMS.

The *Farmers' Society* of Barnwell District will award the following premiums—each to consist of Twenty dollars, or a Silver Cup of that value, at their stated meeting, the 3d Monday in January, 1824.

1st, For the best Male or Female Calf, not more than one year old; 2d For the best Bull, Steer or Heifer, not more than two years old; 3d, For the best Stallion, or brood Mare.

Also premiums of Fifteen dollars or a Silver Cup of that value—1st. For the greatest quantity of Indian Corn, the produce of one acre of upland; 2d, For the greatest quantity of Indian Corn, the produce of one acre of either swamp or pond land. The Corn may be of Carolina Seed, or obtained from any part of the United States; 3d, For the greatest quantity of Rice, the produce of one acre of either high or low, land, and 4th, For the greatest quantity of Root or Slip Potatoes, the produce of one acre of either high or low land.

Also, Premiums of Ten dollars or a Cup of that value—1st, For the greatest quantity of Peas, the produce of one acre of either high or low land; 2d, For the best Hog, not more than two years old; 3d, For the best Male or Female Hog, not more than one year old; and 4th, For the best Ram.

Also, Premiums of Five Dollars—1st, for the best specimen of Cotton Homespun, not less than ten yards; and 2d, For the best specimen of Homespun, not less than ten yards, of a Cotton Warp and Wool Filling.

At the stated Meeting on the 3d Monday in October next, they will award Two dollars for the heaviest Pumpkin; and also the heaviest Sweet Potato, Two dollars. The Pumpkin and Potato must be exhibited to the Society on that day.

Each Animal must be raised by the competitor, and exhibited at the said meeting in January. Should the Animals exhibited not be deemed above mediocrity, the Society will not award a Premium.

The Acre to be square and not more than 210 feet square. The Crops must be planted and harvested in a sound and merchantable state, within the period of twelve months. A detailed account of the mode of cultivation and preparation is requested.

It is expected all candidates will produce such testimony as to prevent any doubts relative to the correctness of their statements in regard to the age of their animals, and the produce of their fields.

JOHN S. BELLINGER, *President.*
SERMON BONSALL, *Sec'ry. pro. tem.*
Barnwell Court House, Jan. 23, 1823.

IMPORTANT MELIORATION IN SURGERY.

The formidable operation of *Lithotomy*, or of the extraction of the stone or calculus, is now reduced to a degree of simplicity almost incredible, by an invention of W. W. Sleigh, Esq. Professor of Anatomy, Physiology and Surgery in this city. We shall not mention the particulars, except the remarkable circumstances that follow. The skin is not touched with the knife; the operation occupies not more than the eighth part of a minute; and it is not accompanied with much more danger or pain, if it is so much, as the bleeding in the arm. Thus an operation regarded by the most celebrated men of the age as accompanied with the most imminent danger, and the most acute pain, becomes as simple as mere *venesection*. We understand that the operation, such as it was *originally* conceived by Dr. Sleigh, was subject to many difficulties, which have been effectually obviated by certain measures discovered by him during the last twelve months of his application to the subject, without which it cannot be undertaken with safety. The Doctor has not yet communicated his method in full to any one; but he will soon publish a treatise in London, where we understand he intends going in the course of the approaching summer.

We have seen a stone which the Doctor extracted on the 18th inst. It weighs, independently of numerous fragments, 788 grains; and its circumference, measured in two opposite directions, is five inches. The patient was well on the third day.—*Montreal paper.*

VACCINE INOCULATION.

It is a very remarkable circumstance, that since vaccine inoculation has become general, as a substitute for small-pox, we scarcely ever see or hear of those eruptive disorders to which the term varicella or chicken-pox, has been somewhat vaguely applied. The fact no one will dispute; but opinion does not seem quite so unanimous as to the explanation of which the circumstance is susceptible. Dr. Thompson maintains, and we think justly, that all varioloid diseases spring from one source; and the modified small-pox which so frequently follows vaccination, and the chicken-pox of former times, are in fact the same distemper, rendered different in their complexional character by the present mild mode of inoculating—inoculating we say: for it would seem that even the genuine vaccine virus is but a modification of the small-pox poison, disarmed greatly of its noxious power by its having become the disease of a brute animal.

Quarterly Review.

* * *

☞ The following statistical view of New York, taken from the Census of 1821, compared with that of Scotland, in 1811, as stated by Sir John Sinclair, exhibits a singular coincidence in one of its features.—The sums are given in round numbers.

	New-York,	*Scotland,*
Population	1,400,000	1,800 000
Acres of improved land	5,740,000	5,040,000
Number of neat cattle	1,220,000	1,047,000
Number of horses	263,000	243,000
Number of sheep	2,100,000	2,803,000
Members of Congress from New York	34	
Members of Parliament from Scotland		30
Revenue of New York	$900,000	
Revenue of Scotland		$18,600,000
Exports of Scotland yearly, about		21,000,000
Imports		16,000,000

Being an excess of exports of about 4,700,000 dollars.

☞ The lapse of 50 years has produced, on the face of this country, perhaps a greater change than was ever produced on the face of any other territory on the globe within the same time. We do not, of course, speak of spots of ground of a few square miles, but of extensive territories. Less than 50 years ago, the now populous and flourishing state of Kentucky had not a white inhabitant.

Where the Trannsylvania University now stands, or near it, there ranged in 1775, herds of thousands of buffaloes. We mention this fact at the present moment, because it makes more striking the following statement of the present extent of that flourishing Institution. The catalogue of the Officers and Students, for the present year, presents the following aggregates:—

Officers of Instruction	15
Law students	44
Medical students	170
Under graduates	121
Preparatory Department	51

The whole number of students in all the languages and sciences, is 386, on a spot where, less than 50 years ago, we repeat, Hunting and War were the only studies of the aboriginal race.

FOR THE AMERICAN FARMER.

NAKED BARLEY.

About the year 1810, I obtained, from a gentleman who accompanied Captain Cook and Sir Joseph Banks round the world, a few bushels of a naked barley, which was, I understood, procured on that voyage, and the same kind as the Arabs feed their famed horses with: this barley produced a vast crop, and the grain weighed equally heavy as the best wheat, and matted pretty well, but was sown very early in the fall, and produced most beautiful pasture, both in autumn and spring for sheep, and afterwards yielded upwards of fifty bushels of barley per acre; but I gave up growing this grain from its requiring so much thrashing, occasioned by one half of the husk, or bran, adhering to the straw, and the other half of it coming off with the beard, when it is thrashed,—in this country it would, of course, thrash out much better.

Mr. Flower mentions in No. 46, vol. 4 of the Farmer, sowing his naked barley on 12th May, in other respects, I agree with him, particularly as to grinding—as my workmen bought the whole of what I had to spare for bread, and praised it much.

Mr. Flower now lives at Albion, Edwards county, Illinois. ALBION.

P.S.— Do ask your friend "Jeremiah Simple," if he ever met with a head of corn that consisted of an *uneven* number of rows.*

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*The Editor must here answer for his absent *friend* Jeremiah—who, when in hearing, was never slow in answering for himself To the execution of a delicate and responsible service, requiring in its commander skill, courage, address, and decision, he has been called by his country as with one voice. May his success equal his exertions to command it! When he returns to "wife, children and friends," he will cheerfully rejoin his brother Farmers, and with them practise or theorise—in the papers or at a plowing match.

"In him though the foe feel the paw of the Lion,
"The battle once ended, he's the heart of a lamb.

☞ The paper was so far preoccupied before Albion's letter to his son was received, as to preclude its insertion in this number.—The Editor's arrangement with the printer requires that what is t constitu'e nearly the whole contents of each paper should be put into the hands of the latter prior to the Sunday which immediately precedes the publication.

Scraps from late English papers.

At a sale at Stone, the other day, a team of four beautiful greys, which, about two years since, cost the owner £220, were, knocked down for the sum £88.

A robbery of 20 coombs of wheat was lately effected at Sibton. Mr. White, the proprietor, a few days after received the sacks, with a note containing the following lines:—

"We have got your wheat,
"And you can't find it;
"'Twas a famous wind
"That helped to grind it."

Two Jews were distinguished, one for his skill in pugilism, the other for his fondness of the fair sex. A gentleman being asked to what *tribe* they belonged? answered, "I don't know; had they not been *Jews* I should have supposed one of them to be an *Amorite* and the other a *Hittite.*"

PEARCE V. MASON.—NEGLIGENT DRIVING.

This was an action to recover compensation in damages for an injury sustained by the negligent driving of the defendant's servant, by which the plaintiff had his arm broken, and was likely to be deprived of the use of it the rest of his life. It appeared in evidence, that on the 20th of December last the plaintiff, accompanied by a friend, was walking along Eastcheap. Defendant's servants was passing along driving a wagon. A brewer's dray was standing by the side of the way; but there was full room for the defendant's servant to pass with his wagon, if he had been careful. He, however, drove negligently on by which his wagon struck against a dray cart, which struck the plaintiff, knocked him against a post and shattered his arm. Verdict for the plaintiff —Damages £100.

"I wonder," said a woman of humour, "why my husband and I quarrel so often, for we agree uniformly on one grand point: he wishes to be master, and so do I."

Two female preachers, of the Wesleyan Methodist persuasion, have been taking a circuit of preaching through all the neighbourhood between Bury and Diss. At the latter place, Tuesday se'nnight in the afternoon and evening they preached to crowded congregations (several hundred persons could not obtain admission), who were addressed by a female preacher in the school room. These ladies are said to be persons of fortune, and of great respectability in the neighbourhood of Laytonstone, in Essex. They are in the decline of life, and evinced considerable talent as well as great energy in the cause in which they are engaged, and afforded much satisfaction to a numerous assembly, made up of dissenters of all denominations.

Lately, at Mr. Duckham's sale under distress, in the parish of Uffculm, Devon, a good four-wheel wagon, and a lot of chains, bows, cart harness, yokes, &c. enough to fill the wagon, were bought for twenty-six shillings and sixpence! good cider was sold for 12s. 6d. per hogshead, cask included; and many lots of excellent potatoes at 6d. and some at 3d. per bag.—*Gloucester Journal.*

A person at Rochester, near Uttoxeter, a few days ago, who had obtained various credits of the public, died, and was buried. A few days after reports were abroad of his ghost being seen; and suspicions arose on the subject of his decease, on which the coffin was taken up, and found to be filled with stones. The defunct debtor is still at large and suspected to be practising on the living in some other place.

DEAR SPORT.—A respectable individual of a neighbouring village has, within these last few days, been proceeded against for the recovery of fines to the amount of £350, for having killed seven pheasants a few days before the time allowed by law.—*Leicester Chronicle.*

Nearly every day since his Majesty left town, the Cabinet has been occupied in discussing a matter of the utmost importance to the State, which the wishes of the highest personage in the country have forced on its consideration. We have long known the extreme anxiety in a particular quarter to endeavour to perpetuate in his own immediate descent all the honours and glories centring in his illustrious person. To remove, then, what is deemed by the personage most deeply concerned, an obstacle, though legal, founded solely in prejudice, and to induce Ministers to endeavour, by the implied sanction of all the influence attached to their offices, to prevail upon Parliament to alter by future enactment this bar to personal gratification, has we understand, been the cause of all those meetings. Should Ministers relax, and with their habitual subserviency give in to the ardent wishes of him most interested, "a high born beauty of the Court," full of youth, grace and every accomplishment, both of mind and person, is the object to be made most happy.

Probable meaning of the above when translated—the King of England wishes to marry some handsome young *British subject.*

Edit Am. Farmer.

* * *

TO THE EDITOR OF THE NEW ENGLAND FARMER.

Sir—As any thing relating to agriculture, however small, as to an individual, may be valuable in a public view, I send you for your paper (if you think it worthy) the following infallible cure for the diarrhœa, looseness, or scouring in calves. I call it infallible, because in thirty years use of it I have not known of its failing to effect a cure by *once giving*, but in *one* instance, and in *that* a *second* effected it. I think it much more convenient for farmers, than the medicine recommended in your paper, No. 27.

Put into a suitable bottle, about half a pint of good Cider, (not sweet nor bottled,) then open a vein in the Calf's neck and let into the bottle about the same quantity of blood; shake it quickly well together, and put it down the Calf's throat, before it has time to coagulate, which is easily done with the bottle.

I am, Sir, your's respectfully,
LOVETT PETERS.
Westboro', Worcester County, Feb. 7, 1823.

THE FRUITFUL COW.

A very extraordinary brood of calves was produced by my neighbour Wigdin's cow, on the evening of the 22d inst. She had three calves at one litter or birth, they were nearly of a size and colour, but for want of proper accommodation and attention, one of them died the next day; this cow is about middle size, and about six years old, has had eight calves, and four of them within the past year. The last summer, on but middling keeping, her owner sold from her milk 6lbs. of butter per week, besides what was used in their small family, as they had but one cow.—Such may be truly called a family friend.

THOMAS BEESON.
Brandywine Hundred, 2d Mo. 23d, 1823.

PUBLISHED IN THE AMERICAN FARMER, BY ORDER OF THE STATE.

Prince Georges County, January 6th, 1823.

A report of the Tobacco Inspected at and delivered from the Upper Marlborough Inspection Warehouse, during the quarter commencing on the seventh day of October, eighteen hundred and twenty-two, ending the sixth day of January, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Reinspected.	Total.
Number inspected.	45			hhds. 45
Number delivered.	348			348

SCOTT & SCASSEER, Inspectors,
Upper Marlborough Warehouse.

TREASURY OFFICE, ANNAPOLIS, FEBRUARY 27th, 1823.

True copy from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

THE FARMER.

BALTIMORE, FRIDAY, MARCH 7, 1823.

☞ THE NEXT MARYLAND CATTLE SHOW.—Arrangements will speedily be made, and published, for the next Maryland Cattle Show, to be held on the Society's lots on the Frederick road, as heretofore.

There will be distributed, premiums to consist of pieces of silver plate amounting to about $600.—A good portion of which may be expected to go to the Ladies of the Eastern Shore, for their ingenious and beautiful domestic fabricks—so properly called, in the most useful sense of the word. Particulars hereafter.

☞ Though it has always been designed that the subject of Internal Improvements, strictly speaking, should occupy a considerable portion of this journal; that design has hitherto been executed, to a very limited extent—we deem it therefore expedient to announce, that we shall certainly give it more attention and space in the ensuing volume.

In connexion with improvements in soil and tillage, it is natural to look for increased facilities in the transportation of produce to the best markets; and he must have been but a careless observer, who has not anticipated the near approach of the time, when the *national power and resources, will be applied to the construction of canals and roads.* It is probable that the adoption of measures to this end, will constitute the distinguishing feature of the next administration, as the present one has been made conspicuous by expenditures on permanent fortifications, and by the proclamation and exercise of the right to recognise the independence of the South American governments.

The inclination to commence and prosecute great schemes of internal improvement, becomes every day stronger, and more general, and while some can discern no constitutional difficulty in the way of having recourse to national roads and canals, as necessary to the "regulation of internal commerce"—others, who "keep the promise to the ear, and break it to the sense," are willing to borrow a little authority for the occasion, rather than wait the slow, and almost impracticable process of altering the constitution—persuading themselves that ends so beneficent, blessings so extensive, will justify almost any means. Hence it is easy to see, that all obstacles are melting away under the growing conviction of immediate benefits. These great works will go on, and all must unite, in the wish to see them *skilfully planned and judiciously executed.* To aid in accomplishing *this object*, we shall lend our journal, convinced as we are, that we cannot better promote the interests of those who patronise it. Can it be necessary, to satisfy our readears, that we should explain the connexion between faciliity and cheapness of transportation, and the prosperity of the landed interest? We trust not, and we do not propose to appropriate more of *their* paper to the matter in question, than may be necessary to an agreeable variety in its contents, and to the end of keeping them posted up as to the progress of internal improvements, and the principles of philosophy, and economy, on which such improvements should be conducted.

We think it probable that we shall publish Mr. Hemphill's speech in the House of Representatives, in the first instance—chiefly to present to the reader an outline of such works as have been executed in other countries, and their effects, and a view of what has been proposed in our own. It will serve to conduct him fairly into the field of reflection, and research—we shall afterwards help him with such lights, as we can borrow—for so far from holding it degrading to *borrow* light, we almost deprecate the judgment passed upon Prometheus, for stealing it even from Heaven

☞ The sample of sugar sent by Mr. Rose is far superior to any we have ever seen made from the maple, and more exempt from its peculiar flavour. The subject has appeared to deserve more particular notice—hence we have added to Mr. Rose's letter, an article on the same subject, which had some time since attracted our notice, and been put on file—we have sent small samples, as a curiosity to many of our correspondents, and have deposited the remainder, at the exchange.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $7 25—Howard st. Superfine, $6 62½—Wharf, do. 6 12½—Wheat, white, $1 35 to 1 40—Red do., $1 32 to 1 35—Rye, 71 to 75 cents—Corn, 60 to 62 cts.—Oats, 35 to 37½ cents—Beef, live cattle, $5 to $5 50 per cwt.—Beef, 8 cents per lb.—Bacon, round, 10 to 11 cts.—Pork $4 50 to 5 50 per c lb. 6 to 8 cts. per lb.—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $6 50 to 7—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $5—Millet, $2—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons, 32 to 34 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, none in market—Herrings, No. 1, $3 62½ per bbl.—No. 2, $3 37½—Fine salt 80 to 90 cts. per bush.—Coarse, do. 75—Butter, 20 to 25 per lb.—Eggs, 25 cts. per doz.—Turkeys, 75 cts. to $1—Geese, 37½ to 50 cts. Chickens, $2 per doz.—Straw, $10 per ton—Hay, $16.

MARYLAND TOBACCO—Not in great demand, prices same as before.

GOODSELL'S PATENT HEMP AND FLAX DRESSER AND GRAIN THRASHER.

The subscriber having purchased an interest in the above named machine, is ready to dispose of rights for the counties of Sullivan, Ulster, Dutchess, and all other counties south of them, in the state of New York; the states of Connecticut, New Jersey, Pennsylvania, and the states and territories south and west thereof.

The said machine weighs about 200 lbs. is very simple in its construction, and almost indistructible in its composition, being made chiefly of cast iron. When driven by *one horse*, or water power, it is capable of breaking, scutching and hackling of dew or water rotted flax by the labour of a single person, 100 lbs. per day, and in a style far superior to that usually done by hand. Of hemp, that is well rotted, (and it is not pretended that it will dress unrotted hemp or flax,) the same person, with the same machine, may dress out for market, from, 2 to 300 lbs per day; and, with the most trifling alteration of the rest or fulcrum, upon which the flax and hemp are held when broken, the same machine will thrash out from 60 to 80 bushels of any kind of grain per day.—A clover cleaner, and straw cutting apparatus, may be attached to it, also, at pleasure, but they are not intended to be furnished with the machine. Those who may wish to be make use of them, will be furnished with a model for the purpose. The whole is set in motion with cog wheels, or spur wheels. A five inch strap over a drum and whirl, of suitable dimensions, the fixtures for which, where the farmer has timber of his own, may be completed at an expense of about ten dollars, constitute its gearing. The price of a single machine and the right to use it, is *one hundred dollars.* There is one now in daily operation at the subscriber's place at Hoboken, opposite the city, where gentlemen may satisfy themselves of its performance and utility.

Letters, post-paid, directed to the subscriber at New York, requiring further information or the price of a state, county or town, will be duly attended to.

SAML. SWARTWOUT.

Printed every Friday at $4 per annom, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, at the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for Printing or Binding, with proper directions promptly attended to, addressed to J. Robinson, Baltimore.

THE AMERICAN GARDENER.

CHAPTER V.

FRUITS.

Propagation, Planting, Cultivation.

LIST OF FRUITS.

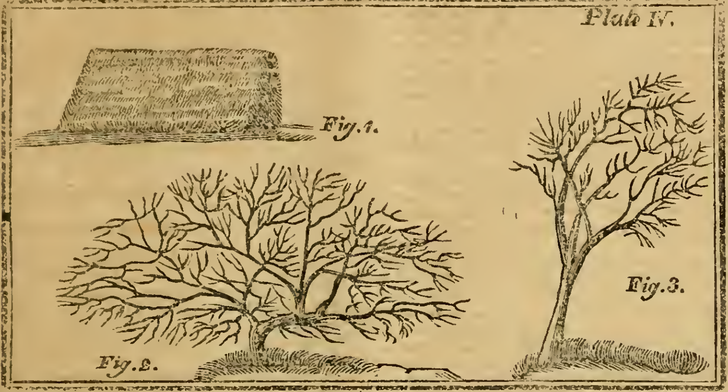
Plate IV.
Fig. 1.
Fig. 2.
Fig. 3.

318. PEACH.—The peach being the principal tree for the garden, I shall under this head, give directions for *pruning* and *forming the tree.*—Peaches are propagated by *budding*. The *stock* should be of *plum*, for the reasons given in Paragraph 281.—The tree is to be *planted*, agreeably to the directions in Paragraphs 282 to 288. And now for the pruning and forming the tree. Look at Plate IV. *fig* 2, and *fig* 3. The first is a peach tree such as I would have it at four or five years old; the last is a peach tree such as we generally see at that age. The practice is to plant the tree, and to let it grow in its own way. The consequence is, that, in a few years, it runs up to a long naked stem with two or three long naked limbs, having some little weak boughs at the tops, and, the tree being top-heavy, is, nineteen times out of twenty, leaning on one side; and, it presents, altogether, a figure by no means handsome in itself or creditable to the owner.—This is *fig* 3.—Now, to have *fig* 2, the following is the way.—The tree should, in the first place, be budded very near to the ground. After it be planted, cut it down to within a foot and a half of the ground, and always cut sloping close to a bud. In this foot and a half, there will be many buds, and they will, the first summer, send out many shoots. Now, when shoots begin to appear, rub them all off but *three*, leave the top one and one *on each side*, at suitable distance lower down. These will in time become limbs. The next year, top the *upright* shoot (that came out of the top bud) again so as to bring out other *horisontal limbs*, pointing in a different direction from those that come out the last year. Thus the tree will get a *spread*. After this, you must keep down the aspiring shoots; and, every winter cut out some of the weak wood, that the tree may not be overburdened with wood. If, in time, the tree be getting thin of bearing wood towards the trunk, cut some of the limbs back, and they will then send out many shoots, and fill up the naked places. The lowest limb of the tree, should come out of the trunk at not more than 9 or 10 inches from the ground. The greater part of the tree will be within the reach of a man from the ground; and a short step-ladder reaches the rest.—By this management the tree is always in a state of full bearing. *Always young*. To talk of a tree's being *worn out* is nonsense. But, without pruning it will soon wear out. It is the pruning that makes it always young. In the "*Ecloe du Jardin Potager*," by Monsieur De Combles, there is an account of peach trees in full bearing at *fifty years old*. And, little do people here imagine to what a distance a peach tree will, if properly managed, extend. Mr. de Combles speaks of numerous peach trees extending to more than *fifty feet* in length on the trelis, and *twelve feet* in breadth, or heighth, and in full bearing in every part. Here is a space of *six hunderd square feet*, and, in case of a good crop, four peaches at least in every square foot, making, in the whole, 2,400 peaches, which would fill little short of *ten or twelve bushels*. This is to be seen any year at Montreuil in France. To be sure, these trees are tied to trelises and have walls at their back; but this climate requires neither; and, surely, fine trees and fine fruit and large crops may be had in a country where *blights* are almost unknown, and where the young fruit is *never* cut off by *frosts*, as it is in England and France. To preserve the young fruit in those countries, people are compelled to *cover* the trees by some means or other, in March and April. Here there needs no such thing. When you see the blossom, you know that the fruit is to follow. By looking at the *Plan* of the Garden, Plate I, you will see, that the *Plats* No. 8 and 9, contain 30 trees and the two vine trelises. The *Plats* are, you will remember, 70 feet long and 56 wide. Of course, putting 5 trees one way and 4 the other, each tree has a space of 14 feet, so that the branches may extend horisontally 7 feet from the trunk of the tree, before they meet. In these two Plats 14 feet wide is left clear for the grape-vines.—These 30 Peach-trees, properly managed, would yield more fruit, even *in bulk*, than a large orchard in the common way; and ten times as much in point of value; the size as well as the flavour of the fruit are greatly improved by this mode of culture.—However, the *sort* is of very great consequence. It is curious enough, that people in general think little of the *sort* in the case of *peaches*, though they are so choice in the case of *apples*. A peach is a *peach* it seems, though I know of no apples between which there is more difference than there is between different sorts of peaches, some of which melt in the mouth, while others are little better than a white turnip.—The sort is, then, a matter of the first importance; and though the sorts are very numerous, the thirty trees that I would have should be as follows:—1 *Violette Hailve*, 6 *Early Montaubon*, 1 *Vanguard*, 6 *Royal George*, 6 *Grosse Mignonne*, 4 *Early Noblesse*, 3 *Gallande*, 2 *Bellgarde*, 2 *Late Noblesse*. These are all to be had of Mr. Prince, of Flushing, in this island, and, as to his *word*, every body knows that it may be safely relied on. What is the trifling expence of 30 trees! And when you once have them, you propagate from them for your life. Even for the feeding of hogs, a gallon of peaches of either of the above sorts is worth twenty gallons of the poor pale, tastless things that we see brought to market.—As to *dried* peaches, every body knows that they are managed as dried apples are; only that they must be gathered for this purpose before they be soft.

319. PEAR.—Pears are grafted on *pear-stocks*, on *quince-stocks*, or on those of the *white-thorn*. The last is best because most *durable*, and, for dwarf trees, much the best, because they do not throw up wood so big and so lofty. For orchards, pear-stocks are best; but not from *suckers* on any account. They are sure to fill the orchard with suckers.—The *pruning* for your pear trees in the garden should be that of the *peach*. The pears will grow higher; but they may be made to spread at bottom, and that will keep them from towering too much. They should stand together, in one of the *Plats*, 10 or 11.—The sorts of pears are numerous; the six that I should choose are, the *Vergalouse*, the *Winter Bergamot*, the *D'Auche*, the *Beurre*, the *Chaumontelle*, the *Winter Bonchretian*.

320. PLUMS.—How is it that we see so few plums in America, when the markets are supplied with cart-loads in such a chilly, shady, and blighty country as England A Green-gage Plum is very little inferior to the very finest peach; and I never tasted a better Green-gage than I have at New York. It must therefore, be negligence. But Plums are prodigious *bearers*, too; and would be very good for hogs as well as peaches.—This tree is grafted upon plum-stocks, raised from *stones* by all means; for *suckers* send out a forest of suckers.—The pruning is precisely that of the peach.—The six trees that I would have in the garden should be 4 *Green-gages*, 1 *Orlean*, 1 *Blue Perdrigon*.

321. QUINCE.—Should grow in a moist place and in very rich ground. It is raised from *cuttings* or *layers*, and these are treated like other cuttings and layers.—Quinces are dried like apples.

322. RASBERRY.—A sort of *woody herb*, but produces fruit that vies, in point of crop as well as flavour, with that of the proudest tree. I have never seen them fine in America since I saw them covering hundreds of thousands of acres of ground in the *Province of New Brunswick*. They come there even in the interstices of the *rocks*, and, when the August sun has parched up the leaves, the landscape is *red with the fruit*. Where woods have been burnt down, the rasberry and the huckle-berry instantly spring up, divide the surface between them, and furnish autumnal food for flocks of pigeons that darken the earth beneath their flight. *Whence* these plants *come*, and cover spots thirty or forty miles square, which have been covered with woods for ages upon ages, I leave for philosophers to say, contenting myself with relating how they come and how they are treated in gardens.—They are raised from *suckers*, though they may be raised from *cuttings*. The suckers *of this year*, are planted out in rows, six feet apart, and the plants two apart in the rows. This is done in the fall or early in the spring. At the time of planting they should be cut down to within *a foot* of the ground. They will bear a little, and they will send out several suckers which will bear the next year.—About four is enough to leave, and those

of the strongest. These should be cut off in the fall or early in the spring, to within four feet of the ground, and should be tied to a small stake. A straight branch of *Locust* is best, and then the stake lasts a life-time at least, let the life be as long as it may. The next year more suckers come up, which are treated in the same way.—Fifty clumps are enough, if well managed.—There are *white* and *red*, some like one best and some the other. To have them fine, you must dig in manure in the Autumn, and keep the ground clean during summer by hoeing.—I have tried to *dry* the fruit; but it lost its flavour. *Rasberry Jam* is a deep red *sugar;* and rasberry-wine is red brandy, rum, or whiskey; neither having the taste of the fruit. To *eat* cherries, *preserved* in spirits, is only an apology, and a very poor and mean one, for dram-drinking; a practice which every man ought to avoid, and the very thought of giving way to which ought to make the cheek of a woman redden with shame.

323. STRAWBERRY.—This plant is a native of the fields and woods here, as it is in Europe. There are many sorts, and all are improved by cultivation. The *Scarlet*, the *Alpine*, the *Turkey*, the *Haut-bois*, or high-stalked, and many others, some of which are white, and some of so deep a red as to approach towards a black. To say which sort is best is very difficult. A variety of sorts is best.—They are propagated from young plants that grow out of the old ones. In the summer the plant sends forth *runners.* Where these touch the ground, at a certain distance from the plant come roots, and from these roots, a plant springs up. This plant is put out *early* in the fall. It takes root before winter; and the next year it will *bear a little;* and send out runners of its own.—To make a Strawberry-bed, plant three rows a foot a part, and at 8 inches a part in the rows. Keep the ground clean, and the new plants, coming from runners, will fill up the whole of the ground, and will extend the bed on the sides.—Cut off the runners at six inches distance from the sides, and then you have a bed *three feet wide*, covering *all the ground;* and this is the best way; for the fruit then lodges on the stems and leaves, and is not beaten into the dirt by heavy rains, which it is if the plants stand in clumps with clear ground between them.—If you have more beds than one, there should be a clear space of two feet wide between them, and this space should be well manured and deeply digged every fall, and kept clean by hoeing in the summer. If weeds come up in the beds, they should be carefully pulled out.—In November the leaves should be cut off with a scythe, or reap-hook, and there should be a little good mouldy manure scattered over them.—They will last in this way for many years. When they begin to fail, make new beds. Supposing you to have five or six beds, you may make one new one every year; and thus keep your supply always ample.

324. VINE.—See *Grape.*

325. WALNUT.—The butter-nut, the black walnut, the hickory or white walnut are all inhabitants of the American woods. The English and French Walnut, called here the *Madeira Nut*, is too sensible of the frost to thrive much in this climate. Two that I sent to Pennsylvania in 1800 are alive, and throw out shoots every year; but they have got to no size, their shoots being generally cut down in winter.—Walnuts are raised from seed.—To preserve this seed, which is also the fruit, you must treat it like that of the *Filberd*, which see.—It is *possible*, that the Madeira Nut grafted upon the black walnut, or upon either of the other two might thrive in this climate.

CHAPTER VI.

FLOWERS.

Of Flowers, and of Ornamental Gardening in General.

326. My reasons for making *Flowers* a part of my subject, have been stated in Paragraphs 6 and 97. However, if the American Farmer have no taste for flowers, his wife and daughters may; and this part of the book can, at any rate, do him no harm.

327. Under the head of Flowers come flowering *trees* and *shrubs;* and, therefore, I must, in this place, say a little of these and of ornamental gardening. It is by no means my intention to attempt to give an account of *all* the flowers that come into the florist's catalogue. That catalogue, with only a very short description of each flower, would fill ten volumes, each surpassing this in bulk. I do not blame the taste of those who study *botany*, and who find pleasure in the possession of *curious* trees and plants; but all that I shall attempt, is, to speak of those flowers that stand most prominent as their capacity of making a *beautiful show* and of sending forth *fragrance.*

328. As to the *spot* for flowers, the smaller kinds and even small shrubs, such as roses, dwarf honey-suckles, and the like, may be planted by the sides of the broad walks in the kitchen garden, or a little piece of ground may be set apart for the purpose. In cases where there are what are usually called *pleasure-grounds*, large shrubs, and, if the grounds be extensive, lofty trees come in. And, in the placing of the whole trees and plants, the most lofty should be furthest from the walk.

329. As to the manner of sowing planting, transplanting, and cultivating, what has been said of fruit trees and of garden vegetables and herbs applies here The ground must be *good*, well tilled, and kept clean, or the plants and flowers will not be fine.

330. Before I proceed to the *Alphabetical List*, let me again observe, that I merely give a *selection*, such as appears to me to be best calculated for gratifying, at different seasons, the sight, or the smell, or both. That there is a great deal in *rarity* is evident enough; for while the English think nothing of the *Hawthorn*, the Americans think nothing of the *Arbutus*, the *Rhododendron*, the *Kalmia* and hundreds of other shrubs, which are amongst the choicest in England. The little dwarf brush stuff that infects the plains in Long Island under the name of "*Kill Calf*," is, under a fine *Latin* name, a choice green house plant in England, selling for a dollar when not bigger than a handful of thyme. Nay, that accurse stinking thing, with a yellow flower, called th "*Plain-Weed.*" which is the torment of th neighbouring farmer, has been, above all the plants in this world, chosen as the most conspicuous ornament of the front of the King of England's grandest palace, that of Hampton-Court, where, growing in a rich soil to the height of five or six feet, it, under the name of "*Golden Rod*," nods over the whole length of the edge of a walk, three quarters of a mile long and, perhaps, thirty fee wide, the most magnificent, perhaps, in Europe. But, be not too hasty, American, in laughing at John Bull's king; for I see, as a choice flower in *your* gardens, that still more pernicious European weed which the French call the *Coquelicot* and the English, the *Corn-Poppy*, which stifles the barley, the wheat, and especially the peas, and frequently makes the fields the colour of blood.

331. This is quite sufficient to show the power of *rarity* in affixing value on shrubs and flowers. The finest flowering trees and shrubs in England have been got from America. The *Wild Cherry*, which they call the *bird-cherry*, which here grows sometimes to the height of a hundred feet, and one of which I can now see from my window more than seventy feet high; the *Locust*, most beautiful of trees and best of timber; the *Catalpha*, blossoms far more beautiful than those of the horse-chesnut, broad and beautiful leaves that do not scorch in the hottest sun; all the beautifully blowing *Laurel tribe;* the *Rose of Charon* (as it is called here) and the *Althea Frutex;* the *Azalia* of all colours; *Roses* of several kinds. But, there is one shrub of the larger kind, abundant here, that I never saw there, and that is the thing which some call the *Morning Star.* It has six leaves in its flower, which is in the form of the flower of the *single rose.* The whole flower when open, is about *three times the circumference of a dollar.* Some of the trees bear blossoms quite white, and others blossoms of a whitish peach blossom colour. These blossoms come the *earliest* in the spring. They are out *full*, in Long Island, in the first week in *May*, which is rather earlier than the peach blossoms. In England they would be out full, on an average of years, in the *last week of February*, which is an anticipation of all their shrubs. The trees, which is a great quality, thrive well *under other trees*, which indeed, seems to be their nature. You see, from a great distance, their bright and large blossoms, unaccompanied by leaves, shining through the boughs of the other trees; and some of them reach the height of *forty feet.* This, therefore, is a very fine flowering tree; and yet I never saw one of the kind in England. How beautiful a grove might be made of this tree, the wild-cherry, the Locust, the Catalpha, and the Althea-frutex! And here they are all, only for the trouble of *sowing;* for from the seed the tree will surely come.

332. I shall now proceed to give an Alphabetical List of such flowering Trees, Shrubs and Plants as I think worthy of cultivation; or, rather, that I myself would wish to have about my house, or in my garden. As I go on I shall state some particulars here and there relating to propagation and management; but, to be very particular would be superfluous, seeing that such full directions have been given in the former parts of the work, as to the sowing of all seeds, great as well as small; as to the raising of trees and plants from cuttings, slips, layers, and suckers, and as cultivation and tillage. Flowers are divided into *annuals*, *bienniuls* and *perenniuls.* The first blow and die the year they are sown; the second blow the second year and then die; the third sometimes blow the first year, and sometimes not, and die down to the ground annually, but spring up again every spring. I have not made separate lists; but have included the whole in one Alphabetical List There are sixty trees, shrubs and plants altogether; and, properly cultivated, these will give a grand bloom from May to November.

LIST.

333. ALTHEA FRUTEX.—It is raised from seed, or from suckers. There are several sorts, as to the colours. They should be mixed to make a variety Save the seed in November or December. The pods are full. Sow in the spring. Seed produces the handsomest shrub; and it is to be got almost any where.

334. ANEMONE.—This is a very beautiful flower, and worthy of great pains. It is raised from seed, or from pieces of the roots. Sow the seed in spring. The plant does not blow the first year. The root, which is *tuberous*, is taken up in the fall, dried in the sun, and put by in the ground till spring, when it is put into the ground again. And, during the summer, it sends out young roots,

which must be taken off and planted out, to become *blowers*. There is a great variety of colours and of sizes of this flower.

335. ARBUTUS.—A pretty ever-green, as well known as the oak tree; and is to be got every where.

336. ASTRE (China).—*Astre* is French for *star*, and this flower, in its shape, resembles a star to our view. It is *annual*, bears great quantities of seed, and is sown early in spring. An infinite variety of colours and great quantities of blossoms. It gives no smell; but a clump of it furnishes a great mass of beauty to the sight.

337. AURICULA.—This is one of the flowers, the sorts of which are distinguished by having awarded to them the names of famous *men* and *women*, famous *cities*, and famous *battles*, and so forth. It may be raised from seed; but the flowers proceeding from plants so raised, do not resemble the flowers of the mother plant, except by mere accident. It is a chance if you get a *fine flower* from a whole sown bed. Now-and then one of this description comes, however, and this adds to the list of *names*, if it happen to be one of the like of which has not made its appearance before. Auriculas are therefore, propagated by parting the roots, and every root sends out several young plants annually. When sown, they do not blow till the *second year*; but the old root lasts for many years. Some of these should be *potted*, and kept to blow in the green-house. If planted in the natural ground, they ought to be covered a little in the winter. There are many hundreds of sorts with *names*. So many indeed, that the godfathers in England have been so put to it for great personages to baptize the flowers after that they have been compelled to resort to the heroes and heroines of Romance; accordingly they have *Don Quickset* and *Sancho*. However, vanity supplies the florists, as well as the ship-owners, with a great store of *names*, and auriculas, like ships, are frequently honoured with the names of the original proprietor's wife or daughter.

338. AZALIA.—That little American Honeysuckle that impedes our steps when shooting on the skirts of woods. It, however, blows profusely, though it has no smell like the English honeysuckle.

339. BALSAM is an *annual* and most beautiful plant, with great abundance of flowers. Sow when you sow Melons, at a distance of four feet; leave only one plant in a place; let the ground be rich and kept clean; it will blow early in July, and will keep growing and blowing till the frost comes, and then, like the cucumber, it is instantly cut down. I have seen Balsams in Pennsylvania 3 feet high, with side-branches 2 feet long, and with a stem much bigger than my wrist, loaded with beautiful blossoms. Plant, branch, leaf, flower; all are most elegantly formed, and the colours of the flower extraordinarily vivid and various. There are, however, some more *double* than others, and some variegated. The seed of these should be sowed, and it comes in great abundance. The flower of the Balsam has no smell.

340. BRIAR (Sweet).—A well known shrub of the *rose* kind. Rows of it carefully planted and pruned make very good hedges, and it will grow in almost any ground, though fastest in good ground.

341. CAMILLIA.—This shrub, which is of the *laurel-tribe*, has lately been introduced in England from Japan. It bears a flower, which when open, resembles a good deal a large full-blown rose; and these flowers, on different plants, are of different colours. It is raised, doubtless, from seed; but it may be *grafted* on the *Hawthorn*; and, I dare say, on the *Crab*. Some of the plants have been sold at 20 or 30 pounds each. By this time they are probably sold at a dollar. The plant as well as the flower are handsome; and certainly *cuttings for grafting* may easily be brought from England. They will stand the winter as well as any of the American laurels.

342. CARNATION.—Here is beauty and fragrance, and both in the highest degree. There are various sorts, distinguished, like those of the Auricula, by *names*; and, what is said of the seed of the Auricula applies here. If sown, the carnation does not blow till the second year. It is usually propagated by *layers*. While it is blowing, it sends out several side shoots near the ground. These are pinned down in *August*, to the earth with a little stick with a hook at the end of it. A little cut, or tongue, is made on the under side of the shoot; and thus the head of the shoot is brought upright. The part that touches the ground is well covered with earth; and *roots* come out here before the fall. Then the stalk, which connects the young plant with the old one is cut off; the young plant is transplanted, and the next year it blows. The old root does not stand another year well; and, therefore, its branches are thus made use of to keep up the race and the sort.—Carnations are rather tender as to frost. And must be well covered in this country to live through the winter. It is best to put them in large pots to give room for *laying*; and to keep them in a green-house in winter, or in some house where they can have sun and air. However, they merit all the pains that can be bestowed upon them.

343. CATALPHA.—That beautiful American tree mentioned in Paragraph 329.

344. CLOVE.—Is only a more handy and less esteemed sort of *Carnation*, which see. It may be propagated like the Carnation; or, by *cuttings* which is the easier way. Instead of *laying* down the side shoots, you cut them off. Then you cut away the *hard* part of the shoot, strip off three or four of the bottom leaves. *Tip* the rest of the leaves; make a little split in the butt of the shoot, and, then, with a little smooth pointed stick, plant the cutting in the ground. This is to be done early in August. The young Cloves will have roots in the fall; and you may transplant them in the open ground or into pots to blow the next year. The old Clove plant will, however, blow for many years. I should think, that, with good covering, such as directed for *spinach*, Cloves would live out the winter in this country.

345. COLUMBINE.—A *perennial*. Very common; but very pretty.

346. COWSLIP.—This is one of the four flowers, without which English pastoral poetry would be destitute of that which awakens the most delightful ideas. The *Cowslip*, the *Primrose*, the *Violet*, and the *Daisy*, are of endless recurrence in that species of writing. They all come early in the spring; and are all beautiful. Neither of them is seen here, and they all might; for they will bear any severity of weather. The Cowslip is of the *Polyanthus* tribe. It is of a delicate yellow colour, and sends forth many blossoms from the same stem, which rises about six inches from the ground. It may easily be propagated from seed, which it bears in great abundance, but, when you once have a plant, the easiest way is to propagate from *offsets*. The plants raised from seed do not blow till the *second year*. The plant is *perennial*. The flower has a delicate sweet smell, and also sweet taste, as a proof of which, cart-loads of the flowers, plucked from the stalks, are sold in London to make "*wine*" with; that is to say to furnish drinkers with an apology for swallowing spirits under the specious name of Cowslip-wine. The leaf of the flower very much resembles in shape the under lip of a *cow*, whence, I suppose, our forefathers gave the plants the name of cowslip.

347. CROCUS.—A bulbous rooted plant, very well known. It is recommended by its *earliness*. It is perfectly hardy. The only thing to do, when it is once planted, is to take care that it does not fill all the ground near it. There are yellow, blue, and white Crocuses. And they are pleasant when nothing else is in bloom, except, at least, the *Snowdrop*, which departs soon after the Crocus begins to appear.

348, DAISY.—I cannot say, with Dryden's damsels, in one of his fine poems, that "the "Daisy *smells so sweet*," for it has very little smell; but is a most beautiful little flower, and blows without ceasing at all times when the grass grows, however little that may be. The opening of the Daisy is the sure sign that there is growth going on in the grass; and these little flowers bespangle the lawns and the meadows, the green banks and the glades all over England. Their colours present an endless variety; and those grown in gardens are double. The field-Daisy is single and about the size of a York-Sixpence. Those in the gardens are sometimes as broad as a quarter of a dollar. And there is one sort, called the *Hen-and-chicken* Daisy, that has a ring of little flowers surrounding the main flower. This plant may be raised from offsets or seed, in which last case it blows the second year. It is perennial.

349. GERANIUM wants *hardiness only* to make it the finest flower-plant of which I have any knowledge. Some give us flower with little or no leaf; others have beauty of leaf as well as of flower, but give us no fragrance; others, like the rose, gives us this added to beauty of flower and of leaf, but, it give us them only for a part of the year. But, the Geranium has beautiful leaf, beautiful flower, fragrant smell from *leaf as well as from flower*, and these it has in never-ceasing abundance; and as to *variety of sorts*, as well in leaf as in flower, it surpasses even the flower of the Auricula. How delightful the country, where Geraniums form the underwood, and the Myrtles tower above! Softly, my friends. Beneath that underwood lurks the poisonous lizards and serpents, and through those Myrtle boughs the deadly winged adders rustle; while all around is dry and burning sand. The Geranium is a native of the South of Africa; and, though it will not receive its death-blow from even a sharpish frost, it will not endure the winter, even in the mild climate of England. But, then, it is so easy of cultivation, it grows so fast, blows so soon, and is so little troublesome, that it seems to argue an insensibility to the charms of nature not to have Geraniums if we have the means of obtaining earth and sun.—The Geranium is propagated from seed, or from cuttings. The seed, like that of the Auricula, does not produce flower or leaf like the mother plant, except by chance. It is easily saved, and for curiosity's sake, may be sown to see if a new variety will come. But, a cutting, from any part of the plant, old wood or young wood, stuck into the ground, or into a pot, will grow and become a plant, and will blow in a month from the time you put it into the ground. You must have plants, indeed, to cut from; but these may be, in small number at any rate, in a window, during winter. When the the spring comes cut them up into cuttings, put these in the ground where you wish to have plants during the summer. They will be in bloom by July, and, before October will be large as a currant tree. Take off cuttings from these during September, put them in pots, and they are ready for the next spring. If you have a *Green-house*, you have Geraniums in full bloom all the long dreary winter.

(To be continued.)

COMMUNICATED FOR PUBLICATION IN THE AMERICAN FARMER.

SOUTH CAROLINA AGRICULTURAL SOCIETY.

The above Society has resolved to award the following premiums at their stated Meeting in February, 1824, to consist of the Gold Medal, value twenty Dollars, and the Silver Medal, value ten Dollars, or pieces of plate of equal value, at the option of the fortunate competitor, with appropriate inscriptions: viz.

For the best conducted experiment, to be made in the year 1823, on not less than one acre of land, not more than 210 feet square, whereby any mode of culture, not heretofore generally used in the State, or by the application of any kind of Manure, or in quantities not generally practised, the production of Black Seed Cotton shall be materially improved.—For the greatest quantity, and not less than two hundred pounds, from one acre. The Gold Medal.

For a similar experiment on Green Seed Cotton, and not less than two hundred and fifty pounds from one acre. The Gold Medal.

For do. on Rice, and not less than sixty bushels from one acre. The Gold Medal.

For do. on Flint Corn, and not less than fifty bushels from one acre. The Gold Medal.

For do. on Gourd Seed Corn, and not less than fifty bushels from one acre. The Gold Medal.

For do. on Sweet Potatoes, and not less than two hundred and fifty bushels from one acre.—The Gold Medal.

For the best Stallion for improving Coach Horses. The Gold Medal.

For do. for improving Farm Horses. The Gold Medal.

For the best Mare for each of the above purposes. The Gold Medal.

For the best Bull. The Gold Medal.
For the best Ass. The Gold Medal.
For the best Boar. The Silver Medal.
For the best Sow. The Silver Medal.
For the best Calf. The Silver Medal.
For the best Cow. The Gold Medal.
For the best Ewe. The Silver Medal.
For the best Ram. The Silver Medal.

For the best conducted experiment, by which the superiority of any Manure (farm-yard and stable Manure excepted) shall be clearly proved as applicable to Corn, Cotton, Rice and Potatoes, by which its produce shall be materially improved. This experiment to be conducted on not less than one quarter of an acre. The Gold Medal.

In order to obtain either of the above prizes, the candidate must forward to the Secretary of the Society, a particular detail of the quality of the soil, the preparatory culture, the quantity and preparation, if any, of the seed, the kind and quantity of Manure, and time of its application, the culture while the crop is growing, the mode of collecting or harvest, and the produce; stating also the produce of the same quantity of land, of similar natural quality, cultivated in the usual manner, in the same season.—

The facts and circumstances to be attested by one or more respectable witnesses. The animals to be produced before the Society at the House of their Meeting, at the Old Race Course, on the Monday subsequent to the Charleston Races. When convenient, a specimen of the progeny of each, to be produced as the best evidence of the value of the animal; without it, a Certificate of their ability to be produced; and in all cases, Certificates of their having been bred within the State.

(Signed) JOHN HUME, *President.*
CHARLES E. ROWAND, *Secretary.*

The following Report of the Committee of the South-Carolina Agricultural Society, for promoting and improving Agricultural and other rural concerns, appointed to award Premiums, was read and confirmed at the Stated Meeting, held at the Old Race Course, on Tuesday, the 18th inst. to wit:

That they met on Monday the 17th, and awarded as follows:

1st. To James Ferguson, the gold medal, for exhibiting his horse Dockon, aged 3 years, raised by himself, in the Parish of St. Johns', Berkley.

2d. To Jacob I'On Lowndes, the gold medal, for exhibiting his horse Independence, aged 5 years, raised by himself, in the Parish of St. Bartholomew.

3d. To Dr. John S. Bellinger, for having raised from one acre of land, the greatest quantity of flint Corn, to wit: 64 bushels and 5 quarts—the gold medal.

4th. To Dr. John S. Bellinger, for having raised the greatest quantity of sweet potatoes, the produce of one square acre—the gold medal.

5th. To Charles E. Rowand, for having raised the greatest quantity of green Seed Cotton, the produce of one square acre of swamp or reclaimed marsh—the gold medal.

A very large Hog, weighing 1146 lbs. aged 5 years, belonging to Captain J J. Reardon, was also exhibited, but not coming under that description of character to entitle him to a premium, the Committee regret it is not in their power to award one. A great many more animals were expected, but on account of the severity of the weather and the badness of the roads, they could not be brought to town. Your Committee beg leave to mention, in justice to those gentlemen to whom premiums are awarded for the productions of the earth, that in their opinion, much more would have been raised, had not the frost in the latter end of April, and the disastrous hurricane of the 27th September taken place, which must have tended in a great degree, to diminish the quantity.

BENJ. SEABROOK, *Chairman.*

FROM THE CHARLESTON COURIER.

Mr. Editor—The following Communication from Dr. JOHN S. BELLINGER, of Barnwell District, to the South Carolina Agricultural Society on the great production of flint Corn and Sweet Potatoes, from one acre of high-land, was read at their meeting, on Tuesday the 18th instant, for which he received two premiums of the Gold Medal. As much good may result from the publication of it, by making known the cultivation practised to obtain so great a product, the Society request the insertion of it in your paper.

I remain, respectfully,
CHARLES E. ROWAND,
Secretary and Treasurer.

GENTLEMEN—I beg leave to communicate to you, the result of an experiment of an acre, (210 feet square) of old high-land, planted this season with flint corn. The land has been in cultivation for more than 20 years, and being manured the three last years, produced three fine crops, viz: In 1819, 330 lbs. of short staple cotton—in 1820, 26 bushels of Oats, and 52 bushels of yellow Connecticut Corn—and the last year 300 lbs. of long staple Cotton. The acre being well ploughed, was made into 35 beds, running nearly east and west, and planted on the 5th March last, with genuine flint Corn, at the distance of 18 inches, on the top of the beds. On the 7th April, it was thinned to one stalk, two grains having been planted in each chop. On the 23d of May, the first tassel appeared; it received two ploughings, and was hoed every 10 or 12 days; the first hoeings were near the Corn, and then this earth thrown back to the crop.—On the 20th June, the three lower leaves were cut off from each stalk—from this time to the 22d July, some more of the blades were cut off, and, on that day, the tops, together with the remaining leaves, were cut off.

On the 27th July, the Corn was turned down. On the 17th April, 100 bushels of Cotton seed were thrown in the alleys, and, on the 29th, this being in vegetation, was well drawn up to the Corn with the hoe. On the 30th May, 200 bushels of Cotton seed were applied to the sides of the Corn, and covered with earth. On the 5th September, the Corn was broke in, and, when shelled, measured 45 bushels and an half of Corn. It was fine Corn, and remarkably sound, not having more than one quart of rotten Corn, (this was not measured.) All the blades and tops were put in the rows, and were covered with earth in hoeing. As well as I could ascertain by weight, the cobs of the Corn weighed 546 pounds; the stalks and shucks 4900, and, at a moderate estimation, the blades and tops must have been 1100 lbs.; so that 6546 lbs. of vegetable matter, were restored to the acre of the product of this crop.

On the 21st of May, the alleys having been well ploughed the day before—I planted a second crop of Flint Corn at the distance of two feet three inches, in the centre of the alley. On the 2d of June, it was thinned to one stalk, two grains having been planted in each chop, which had been soaked 12 hours in Salt Petre and water. On the 11th of June, all leaves of this Corn were broken off to the stalk, to retard its growth, and perhaps strengthen the stalk. On the 30th of June applied to this Corn seventy five bushels of Cotton seed, some being placed around each stalk. This second crop was also manured with rich earth, and Cow pen manure, about 100 bushels of each. The first crop was also manured with 300 bushels of Stable and Cow-pen manure, in addition to the Cotton seed. As the second crop grew, the earth was drawn up, so as to make a small bed, and when the first crop was turned down, at least half of the earth of the first beds was drawn to the second planting. On the 15th of July, the first tassel came out. On the 12th of September this Corn was turned down; the blades of this crop were left on the stalks. On the 10th of October it was shelled, and measured 18½ bushels and 5 quarts; making in all 64 bushels and 5 quarts from the acre. The Corn of the first planting weighing 58 lbs. and of the second crop 54 lbs. per bushel. The cobs of both plantings weighed at the rate of 12 lbs. to the bushel of Corn. The stalks, blades, cobs, and half of the shucks of the second crop, were listed in, and covered with earth. As well as I can estimate the vegetable matter restored to the acre, it must be 10,000 lbs.—consisting of cobs, stalks, shucks and blades.

I must add, the last season has been an unfavorable one for Corn crops. Most crops in my neighbourhood, falling short from 25 to 35 per cent. of the last year. Much of our field Corn fired, especially, such as was planted thick.—Neither of the plantings of this acre, shewed any such appearance, and I must think, had both crops been planted the same time, the product would have been less My acre contained, about 7900 stalks of Corn. The great obstacle to the production of great Corn Crops in our State appears to be, if planted any thing like the proportion which our Northern brethren plant for a great crop, the heat of the Summers in most instances within my knowledge injures the same—to obviate this, my experiment was instituted, and further experience can alone decide upon its propriety. I tried the second crop in two other instances, the first of very old land, the second crop, was half of the first crop, and in the other of better land, the second planting was one third of the first crop. An acre of old land, without manure, and planted in the usual way, also in Flint Corn, produced 10 bushels. During the progress of my experiment, I had reason to believe a planter of our State once made a great crop of corn, from an acre of land planted in a similar way, but cannot learn his name, or the part of the State he resides in. A certificate relative to the produce of my acre of Flint Corn, from Messrs. W. J. Duncan, Wm. R. Bull, C. W. Stewart and Henry Touchstone, accompany the few observations I offer for your consideration.

I planted an acre (210 feet square) of old land with Potato slips in the following way. After having well broken up the same with the plough it was made into flat beds, six feet wide and 210 feet long, with an alley of two feet, between each bed. It had been well Cow penned and ploughed up, three times while the cattle were penned on it.—No other manure was used.—From the 25th to the 28th of May, three-quarters of the acre were planted with slips, the vines being cut from eighteen inches to two feet long, and being doubled, were stuck in the earth eighteen inches square, and from four to five inches deep. On the 26th of June, more vines were planted, and on the 30th the acre was finished On the 17th and 18th July, the vacancies were supplied. It was hoed only twice, the vines soon covering the ground, so as to prevent the use of the hoe. On the 13th and 14th of November, they were dug and measured 280 bushels and 3 pecks—each half bushel being heaped but not packed in, and heaped in the way we allow our Negroes to take them, but heaped in such a manner, as to be a full and just measure, such as they are measured when sold or exchanged for grain.

On the 18th of the same month, an acre (210 feet square) planted with slips on four feet beds in the usual way, was dug, and measured 68 bushels—this acre (as well as the others) is of a light soil and was not measured. A certificate from Mr. H. Touchstone, relative to the Potato crop accompanies this.

(Signed) JOHN S. BELLINGER.

December 17, 1822.

The *Farmers' Society* of Barnwell District this day awarded the following Premiums of Twenty Dollars, or a Silver Cup of the same value:

1st. To James D. Erwin, for the greatest quantity of Grain, from one acre of highland, viz. 46 bushels of Corn, and 49 bushels of Peas, being 94 bushels to the acre. It is proper to state, that from some misunderstanding, relative to the time of gathering the crop from the acre, a part of the Peas were unripe, which would make a reduction of that part of the produce of his acre.

John S. Bellinger made 64 bushels and 5 quarts of shelled Flint Corn. His acre was cultivated in the following manner—a first planting on the 5th of March, yielding 45½ bushels, and a second planting on the 21st of May, 18½ bushels and 5 quarts.

Jennings O'Bannon's product was 52 bushels and 1 peck of Gourd Seed Corn to his acre.

Wm. R. Bull gathered 16 bushels of clean Oats, 22½ bushels of Corn, and 3 bushels of Peas; being 41½ bushels from his acre.

2d Premium, to John S. Bellinger for the greatest crop of Slipp Potatoes, from one acre of high land, viz 280 bushels and 3 pecks.

Wm. R. Bull made 185 bushels from his acre.

3d Premium, to Wm. R. Bull for the best year old Calf.

4th Premium, to John Nimmons, a cup of the value of $10, for the best year old Hog.

A silver cup of the above value ($10) was awarded as an extra premium, to Barnet H. Brown, for a fine young Bull 15 months old.

The Rev. Hansford D. Duncan made 30 bushels of Rough Rice from a pond of half an acre; the seeds sown in the water and not cultivated.

John Ashley, made from an acre of old upland not manured, with the drill husbandry, 18 bushels and 1 peck of clean Oats.

The President of the Society distributed among the members some Seeds, received from *John S. Skinner*, Esq. Editor of that valuable work, the American Farmer; and also some seeds of a kind of Guinea Corn, presented him by Captain *Jacob Wharley*, of Colleton District, and which is said to be very productive when cut as fodder, or used as a pasture.

Two very fine Ruta Baga, or Swedish Turnips, in a state of perfection and vegetation were presented to the Society by Wm. R. Bull.

SERMON BONSALL,
Sec'ry pro. tem. of the Farmers' Society of Barnwell District.

Barnwell Court House, Jan. 20, 1823.

ON MAKING SWEET BUTTER IN WINTER SEASON.

In the 46th number page 367 of this volume, we had the satisfaction to publish an interesting communication signed "A Friend of Farmers," stating the process pursued in making Orange Farm butter in cold weather; and explaining in clear and intelligible terms, the *rationale* of butter making generally. The communication has been copied by the Editor of the EASTON GAZETTE with the following remarks.

Edit Am. Farmer.

[The water should be heated about half way to the boiling point before the pan of milk is set in it—and the heat should be kept up to the same or about the same degree, while the milk pan is in it. If the milk pan be of tin, it may be filled two thirds full of milk, and will float in the water safely.—But if of pewter or other heavy ware it will sink, if the pan be half full.—In the latter case therefore the vessels containing the hot water should be just large enough to receive the pewter basin, the water coming between the side of the basin and the vessel, and yet the top of the containing vessel catching the ledge of the top of the milk basin, and thus preventing it from sinking.—We doubt whether the process of separating the cream from the milk is completed when the milk has been in hot water for 30 minutes.—This may be about the right time for the milk pan to remain in the hot water—it ought to remain in long enough for the milk to be well warmed; but it should then be carefully set away on the dairy shelf, and what has been in the hot water in the morning should not be skimmed till the evening, or perhaps not till next morning.] —*Ed. E. Gazette.*

We give our readers to-day a very excellent essay upon the art of making good winter butter. With the ingenious fixtures of Mr. Baer's Stove we have some acquaintance.—The Stove with its four beautiful copper boilers will cost from 75 to 8[illegible], and to insure it against smoke, the stove pipe must be conducted into the funnel of a chimney.—The building of this funnel will take 2000 bricks, and will cost in bricks, mortar and masons work not less than $20.—Thus this fix to a dairy to simmer four pans of milk at a time will cost $100.—And if the same end cannot be attained on better terms, it is worth the money to any one, who wishes to turn his attention to a winter dairy. But we have great doubts about this fix suiting a summer dairy; the heat of the stove would certainly prove an insuperable objection—and if the stove is to be removed to a distance, this would be inconvenient.

If to the aforesaid chimney funnel you will add a block of brick work six feet by four, and five feet high from the foundation, and three thousand bricks will do the work. In this brick work fix a little concealed fire place on a grate, and directly over the fire fix four dutch ovens, five or six inches deep, and each of the size exactly to contain a milk pan with its water round it—The four dutch ovens would not cost more than $10—the block of brick work $30—to which add the cost of the chimney funnel $20. Thus for $60 you can be better fixed than the Orange farm dairy has been for $100.—We have a practical acquaintance with both these modes of heating water—and we state from knowledge that the water in the dutch ovens will heat in less time than the water in the boilers, and if you choose to go to the expense of shallow coppers instead of the dutch ovens, they will heat quicker still—for two reasons, there is not more than a third as much water, nor more than one third of the depth of water to be heated; and the fire comes directly in contact with the bottom and sides of the dutch oven, and only in contact with a very small portion of the copper boilers to the stove. The fire in the brick work will also heat the water with a less consumption of fuel, as little as Mr. Baer's stove is known to consume. The fire in the brick work will not keep your dairy any thing like as warm in winter, as the fire from the stove; but we do not consider much warmth necessary—and the fire in the brick work gives so little heat into the dairy, that it would be much less likely to incommode you in the summer.—However complete the exclusion of the smoke in the Orange farm dairy while the stove is new and every joint tight, we aver the fact, that the separation in the other mode is more certainly perfect. The bill of repairs on one of Mr. Baer's stoves used two years, has been more than the repairs of the brick and grate fire place would come to in ten.—The fix at the Orange farm Dairy is beautiful and very complete. But the fix we point to, well built and plaistered, is neater—at least forty per cent. cheaper, will take less fuel, and is more durable.—*ib.*

The proprietors of American Porcelain Clay, are requested to apply to the Post Master at Salisbury, Rowan county, (N.C.) for a letter to them, which will answer all the questions the advertiser wished to ascertain.

FOR THE AMERICAN FARMER.

ALBION'S THIRD LETTER TO HIS SON.

"Here then, my soul, thy darling theme pursue,
For every day was Giles a shepherd too."

In the second letter I gave you a plan of the Albion farm, and also a statement of the live stock on it, and how the same was depastured on the first of May—and now I intend to give you a description of our sheep, with some hints to assist you in the selection of these most valuable animals.

These sheep were of the Bakewell kind, with a slight cross of the Lincolnshire breed, which increased the size of the carcase, and also the fleece, but still they retained all the beauty of the Bakewell, for

Of all the various breeds of sheep,
That butchers kill, or graziers keep,
From which do we most comforts reap?
The Bakewell.

What sheep, produce the richest meat,
And in appearance look most neat,
And pay best for the food they eat?
The Bakewell.

Which most of all, the landscape grace,
Contain most bulk, in smallest space,
And where they feed, adorn the place?
The Bakewell.

Which best our craving wants supply,
To feed, and keep us warm and dry,
And make both cold and hunger fly?
The Bakewell.

Which are most tractable and tame,
And will so long as sheep remain,
Immortalize great Bakewell's name?
The Bakewell.

These sheep produced a fleece, weighing from nine to ten pounds, when washed on the animal's back, and of a quality suited for the comb—to be afterwards manufactured into bombazeens, Bumbazetts, Shalloons, Calimancoes, Durants, Carpets, and all kinds of goods requiring long strong wool.

This wool measured in length, from five to fifteen inches, but once I saw a small quantity twenty two inches long, and I knew a gentleman whom report said, had a fleece, which weighed twenty eight pounds, but both these I imagine were not the growth of one year: these sheep usually weighed, when two years old, from twenty to thirty five pounds the quarter, but some of them have, I think, weighed upwards of seventy pounds the quarter.

The grazier in selecting these sheep, is very particular to have them "good handlers," as it is termed, which mode of selecting animals for the butcher, is, I believe, almost peculiar to Englishmen, and perhaps the principal cause, why their butcher's meat is generally considered as very superior—to judge of the quality of the meat of an ox, or sheep by the touch, appears to a superficial observer, as a mere fancy; but surely this is not so difficult a task, as to judge of the nature of a sick person's complaint by feeling the pulse—indeed I have no doubt, but there are Englishmen in the United States, who would, if blindfolded, select from amongst any number, those beautiful Devonshire cattle sent by Mr. Coke of Holkham, in England, to Mrs. Pattison of Baltimore.

In approaching a sheep to handle it, step to it on the near side, and putting the left hand to the opposite side of the animal's neck, bring the front part of its shoulder against your left thigh, where you may, after a little practice, easily hold it, then place the right hand lengthways upon its back, drawing it with the greatest care from the neck, to the setting on of the tail, to ascertain if the back be perfectly straight, and free from a hollow at the back of the shoulders, or an elevation on the loin; then set the same hand astride the back, and pass it along in the same direction, to ascertain the width of the shoulders, ribs and loin; then place the ends of your fingers on the back bone, near to the shoulders, following it as before to the setting on of the tail, where, if it be a fat sheep, you ought to find a gutter nearly the whole length, occasioned by the flesh being very high on each side the bone, so that when the animal is a little raised on his fore legs, water poured on the back, near the shoulders, would run off at the tail—then feel at the front of the shoulder, near to the chest and neck, and also on the opposite side of the shoulder, on the ribs, where you ought to find a quantity of firm fat, then take hold of the ends of the short ribs of the loin, which ought to be very thick—after this examination, lay hold of the near hind foot, and jerk it smartly under him, towards the off fore foot, bringing the neck, with the left hand and knee, at the same time, smartly upwards, in a direction, towards the near hind leg of the sheep, and if properly managed, he will drop on the near side of his rump, when the head may be raised, in a way to cause the back to rest against your legs, with the view to examine his underparts; the four legs, should now incline outwards, the chest feel flat, broad and fat, and the legs full of firm flesh on the inside, down to near the hock; then examine the belly, sides and shoulders, to ascertain if they are well set with good long wool, and that the thighs are not coarse and hairy; again set him on his legs, and continue to examine the fleece, and if after this examination, you find his back straight, top of the shoulders, ribs, loin, and chest wide, legs full of flesh, and all his frame full of fat mutton, which feels particularly deep on the bones, and very solid, *even to hardness*, bones light, skin of a pink color, face and ears long, and free from wool, as also the legs, and all the rest of him thick set, with long, fine, soft, crumpled wool, which easily parts into very large fillets, of the same quality, at the extremity as near to the skin, and nearly of the same quality on all parts of him, you never need fear pronouncing him a good sheep, with good mutton, and good wool.

In selecting sheep, examine the teeth—when lambs, they have eight teeth in the under jaw, and none above; when one year old, they hull the two middle ones, and get two larger teeth, when two years old, they get one more large tooth on each side these, at three, the same, and the fourth year the same, when the whole set appears large; but sometimes they lose all the lamb teeth, when about nine months old, and afterwards, of course they have only these large teeth; shortly afterwards the teeth begin to decay, when the sheep should be fattened off without delay, or you will always have a bad diseased flock.

In catching sheep, never seize them by the wool on the back, as it hurts them exceedingly, and in some cases has killed them, particularly in hot weather, if they are large and fat; indeed it is best to avoid the wool altogether, and accustom yourself to take them by the hind leg, or what is still better by the neck, placing one hand under the jaws, and the other at the back of the ears, when by lifting up the head, a child may hold almost any sheep; but much depends on how a flock is treated, few people are sufficiently gentle with sheep; indeed by kind usage, a man may have them so totally devoid of fear, that he may play with them as he would do with his dog, at any rate never suffer them to be ill treated or terrified, there is no occasion for it, and

"I would not enter on my list of friends,
Though grac'd with polish'd manners and fine sense,
Yet wanting sensibility, the man
Who needlessly sets foot upon a worm."

As I intend to give you, in the form of a monthly journal, the mode of managing our farm, there then, of course, will be a number of other particulars mentioned, respecting sheep.

ALBION.

Middle Town, Kentucky, May 1st, 1822.

JOHN S. SKINNER, ESQ.

Dear Sir,—At a called meeting of the agricultural society of Louisville, I delivered the seeds forwarded by you for them, to my care.—When distributing these seeds, much anxiety was displayed by the members to get them.—And I am directed by the society to return you their thanks for your friendly attention in collecting and forwarding the donation.

I wish their attention to the culture of the plants may be equal to the anxiety displayed to get the seeds.

In your communication of the fourth of April last, you express a wish for further information, relative to the Farina fecundans of vegetables, when seen through high magnifying glasses as animalculæ.

I met with the discoveries of Mr. John Bywater of Liverpool, on that subject; at page 341, of "The travels in the interior of America in the year 1809, 10, and 11.—By John Bradbury, F. L. S. &c." This work was published at Liverpool, in 1817. If you should not meet with it, and I expect it is not very common in America, I will transcribe some of Mr. Bywater's communications on that subject, and forward them to you by some of my mercantile acquaintances*.

I am Sir,
With much respect,
Your very obedient servant,
WM. CHAMBERS,
Corresponding Secretary to the Louisville Agricultural Society.

P. S. This communication, when written, was mislaid, and having laid my hand on it a few days ago, I now forward it as an acknowledgement of past favors.

Your's respectfully,
W. C.

January 2d, 1823.

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* We have received this extract, and will publish it in our next.—*Edit. Am. Farmer.*

Middle Town, Kentucky, Dec. 31st, 1822.

AGRICULTURAL EXPERIMENTS IN THE WEST—LAUDABLE DISPOSITIONS TO MAKE AND REPORT THEM.

John S. Skinner, Esq.

Dear Sir—By my friend Mr. L——, the bearer of this, you will receive a paper on the near, if not inseparable connexion between animal and vegetable productions as promised you in a former communication.

If not by this opportunity, it is probable that I shall soon afterwards be able to forward you some pacoons in time to put into the ground this spring.

The excessive heavy rains, and long continuation of them, during the last spring and fall nearly defeated all of our agricultural experiments in this section of the country.—The tall meadow oat grass recommended by John Taylor, Esq. of Virginia, to whom we are indebted for much useful information on the subject of agriculture, has been cultivated here on a small scale under the denomination of the Egyptian grass. It succeeds well in our soil and climate, is esteemed a good, early and late pasture and may possess other qualities to recommend it that I am not apprised of not having cultivated it.

The Woald Lutcola for dying yellow grows here and is esteemed an acquisition, by our manufacturers, so is the *Woad*.—The Bene, grew to a great size, but did not ripen its seed.—It was planted too late by 3 or 4 weeks. I am apprehensive our seasons are too short for it. It might answer in this latitude on a sandy soil.—My experiments on the different kinds of Peas and Beans have produced great crops of vines, with but little seed, and those which I sowed broad cast were overrun by the weeds—several experiments go to prove that the vetches will not answer here.

Owing to the fine navigable state of the western waters, for the last three or four months so large a portion of the productions of our soil, has gone on to New Orleans, that the prices must be low beyond any former precedent. We are advised that fresh flour is selling at from one to two dollars per barrel—and no doubt other articles will be as much below their former prices.

Inclosed I send you some of the seed of a sweet scented grass. It is but little inferior to the Sarilla in point of flavour—accept sir, my best wishes for the success of your laudable undertakings, and believe,

Most respectfully your's,

WM. CHAMBERS.

P. S.—You sent to my neighbour Mr. L—— L—— a few of the seed of the mangel wurtzel.—They proved to be of marbled kind and 4-5 of the length grew out of the ground and produced immense roots. The bearer, Mr. L——, has instuctions to get as much of the seed as will plant half an acre of ground. It is important to us that it should be of the same kind, if to be had.

W. C.

TO THE EDITOR OF THE AMERICAN FARMER.

Belmont, (near Annapolis,) 23d *Jan*. 1823.

SUCCESSFUL CULTIVATION OF GRAPES AND FABRICATION OF GOOD WINE IN GEORGIA.

Dear Sir—The following is an extract of a letter I received a few days ago from a friend in Georgia, Mr. Thomas McCall, who is seated upon the Oconee river, about 4 miles below the town of Dublin. It is upon the very interesting subject of the cultivation of the vine, and making wine, which I am very glad to see is beginning to be attended to in several parts of our country; and I have no doubt the day is fast approaching when that delicious and useful fruit will be as common as any other, and a vast deal of money be saved to the country, that is now sent abroad for the produce of the vine.

Mr. McCall is a man of science, and information, and accustomed to the best wines; therefore, his judgment as to the quality of the wine that he has made may be depended upon. I send it to you for insertion in the "American Farmer," if you think proper, and am,

Respectfully your obedient servant,

THOMAS CHASE.

EXTRACT.

"You, my dear sir, engrafted me with the vine which has taken deep root, and if I live long it will flourish under my care. I have now half an acre of fine vines, 3-5ths in bearing last year—250 now in nursery to set out.

On the 8th August, my grapes were generally ripe—19 bushels were gathered, from which I pressed on the same day 45 gallons must—the *mere goutte*[*] was 8° of Baume's syrup hydrometer, and the expressed juice was 7°. I added good dry brown sugar[†] until 13½°.[‡]

The juice mixed before sugar was added about 7½° raised to 13½.

Specific gravity—1.050 raised to 1.101½.

On the 12th August the residue of my grapes were gathered, and gave me 32 gallons more *must*. It was 7° and added sugar as before.

October 13th racked off, fumigated with sulphur, on trying the strength with the hydrometer it sunk to—1° or 1° less than rain water, so that it was 14½° lighter, by the change of the saccharum into alcahol. I added 3 per cent. of good French brandy, and bunged up. The wine was quite clear. December 24th I racked off again, and had 61 gals. of very *nice Madeira* Wine. It was so good that I bottled off 16 bottles—lightly fumigated again with sulphur, added 2 per cent. more brandy, and bunged it up. I do you assure that this wine would be pronounced Madeira of very fine quality of the last year's vintage.

It seems to be agreed that the grape in the United States is deficient in saccharum for good wine. It is necessary to make it about as heavy as 14° of Beaume, or the specific gravity of 1,114, which is rather greater. I hold it to be indifferent whether the saccharum is native, or added, as the other ingredients are sufficient in the *must*. Chaptal's opinion appears to be correct—"add that in which nature has been deficient." An acre will produce three pipes of wine.

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[*] The juice which flows spontaneously from grapes without other pressure than their own weight is called *mere goutte* by the French.—*Edit. Am. Farmer.*

[†] We think that the best refined or loaf sugar ought, alone to be employed on such occasions, as it contains scarcely any ferment or leaven; which always and most injuriously abounds in unrefined or brown sugar, and is generally accompanied with some unacceptable flavoring principle.

Our must might, we conceive, be of an approved specific gravity and yet contain too little saccharum to exhaust the active powers of the fermenting principle—it is therefore expedient when we add sugar, to see that it contains no leaven. We repeat that this principle should be rendered effete before we permit the saccharum to be quite consumed by it or converted into alcohol, for upon this point depends the durability or soundness of all wines. Hence it may be readily perceived how desirable it is to employ sugar that has been deprived of leaven by the refiner: more especially when we recollect that an addition of saccharum is most commonly required in consequence of a superabundance of leaven in the juice of our fruit.

[‡] We wish that the weight of sugar employed to give one gallon of the must, these 6½ degrees of Beaume's hydrometer of additional specific gravity had been noted and reported; the cost of this ingredient required per acre could then have been arithmetically found by every reader. Yet this may nevertheless be ascertained experimentally, as the specific gravity has been given: the native must weigh 1,050 and it was artificially raised to 1.101½--an equal bulk of pure water weighing only 1.000. The quantity of any parcel or kind of sugar required to give the additional 51½ degrees of *specific* gravity may therefore be ascertained at pleasure by any person.

Edit. Am. Farmer.

TO MAKE SIZE FROM POTATOES.

One of the beneficial uses of potatoes, not perhaps generally known, is, that the starch of them quite fresh, and washed only once, may be employed to make size, which, mixed with chalk, and diluted in a little water, forms a very beautiful and good white for ceilings. This size has no smell, while animal size, which putrifies so readily, always exhales a very disagreeable odour. That of potatoes, as it is very little subject to putrefaction, appears, from experience, to be more durable in tenacity and whiteness; and, for white-washing, should be preferred to animal size, the decomposition of which is always accompanied with unhealthy exhalations.

FOR THE AMERICAN FARMER.

ANSWER TO A "NORTH CAROLINA FARMER."

The best preventives against fleas in hogs, lice in cattle, and ticks in sheep, are corn meal, and care. The best remedy for the evils they create, is a strong decoction of tobacco, obtained by boiling. Hickory ashes, thrown upon swine, not only assists in destroying fleas, but in removing cutaneous diseases, by causing the animals to rub themselves frequently.

CURWEN.

Philadelphia County, March 5th, 1823.

FOR THE AMERICAN FARMER.

New Kent, Virginia, Feb. 15th, 1823.

QUERIES RESPECTING BEANS AND CLEANING WOOD MARSH LAND.

I have observed in the statement of prices contained in the Farmer, that northern beans are quoted at a much higher price than wheat, corn, or peas. I wish to be informed, the appropriate name of these beans, whether they succeed best in a northern climate, and if a light or stiff soil is preferred? (We have with us a variety of beans which bear well; but the small white bean called the Bonny Bess, is the kind preferred here for a large, or field crop), also the probable product to the acre and the time and manner of planting; *if in these respects* they are peculiar. In a former communication I asked for information if conveniently to be obtained, relative to the reclamation of marsh land, which is covered with a heavy growth of trees, ash, maple and gum.—I have attended to the various communications on the subject of reclaiming marsh lands, which have appeared in the Farmer and elsewhere, but do not recollect any in which this kind of marsh is spoken of. An impression exists in this neighborhood, when large bodies of that land are to be met with, that wood land marsh when reclaimed *will sink* more than that which is free from wood. If any conclusive experiment has been made on this kind of marsh, I should be pleased to know the result, when convenient; if you will make the necessary enquiries to obtain information on the subject I shall be obliged.

The Editor unites in the request for information on the above, not having it in his power to add any thing at present to the publications which have already appeared in the Farmer.

FOR THE AMERICAN FARMER.

Barnwell District, January 27th, 1823.

QUERIES FROM A CORRESPONDENT, AS TO CERTAIN LOOMS AND WOOL SPINNERS.

In looking over the third volume of the American Farmer, page 240, I notice the mention of a new and improved loom, by Mr. B. Wells of Pittsburg, of Warner's improved patent loom, it states it may be made for ten dollars, and a hand accustomed to the use of one of them, can weave sixty yards per day. I also notice in the same volume, page 99, a wool spinner worked by hand, drawing six threads, invented by a Mr. Brown of Rhode Island; as I am a novice in the art of both spinning and weaving, will you be good enough through the medium of your paper, to endeavour to procure the following information—will this wool spinner, spin cotton? and what will be the cost of one of those looms, and one of those spinners, to be delivered in Charleston, free of all expense, save the freight?

Editorial Correspondence.

Large hogs of New Jersey—their breed—credit given to Pennsylvania for breeding fine Heifer—due to New Jersey—superior potato cultivated in that state—Hogs and Potatoes introduced by Mr. Johnston.

☞ In No. 47 of this volume, we published a challenge from New Jersey to the famous rival states of Virginia and New York—that New Jersey would produce by the 12th of March, a heavier hog, than could be found in either of these *great* states, regard being had to age.—The challenge was not accepted, and as the hog has now been killed, we can give his weight, with some interesting particulars, which transpired, in the course of private correspondence, respecting the breed, &c. The extraordinary weight of the animal will show that the challenge was not offered in a spirit of vain boasting, and also that the party from whom it came, was willing to risk a sum, which would have compensated any successful competitor for the trouble of the contest; but we dare say, that those who might have felt inclined to take up the wager will now be well content, that they did not venture on the hazard.

It is obvious that Mr. Johnston's hogs possess uncommonly valuable properties, and must be a great acquisition to the country. Importations made like these, with discernment, and calculated to promote in a matter of *substantial* importance, the best interests of Farmers, ought to be rewarded and signalized by permanent complimentary and commemorative premiums.

Edit. Am. Farmer.

Bridgeton, West New Jersey,
Feb. 12th, 1823.

Dear Sir, .

I received your favor last evening, informing me that I had omitted the sum, I was willing to bet on the weight of the Bridgeton hog. How I came to omit that most important part of the challenge, I am at a loss to account. One hundred dollars was intended; but if any one should object on account of the sum being too small, he can be accommodated with still more, you may say $500—a correct statement of the age however, will be demanded, as we do not expect our pig to outweigh a hog of 2, 3 or 4 years, of age. You may extend the time limited for accepting the wager to the 1st of March.

In answer to your queries, respecting the breed I can only say, that he is not, I believe of the grass breed; he is descended from a stock, imported from England some years since, but I have not yet been able to trace his genealogy back far enough to say from what part of England, or what he is called there—this much I know that they all grow very heavy at from 1 to 2 years of age; I shall be able to send you pigs, from a sow got by the hog, and with pig by a boar owned by Mr. Johnston of this place, imported from Liverpool. Mr. Johnston's boar is a very fine one, and has done great service in the neighbourhood, by improving the breed of hogs. Mr. Johnston killed 2 weeks since, 4 pigs got by this boar, whose average age was not quite 20 months; the oldest about 2 months over, and the youngest 2 months younger, that weighed together 2086 lbs. after they were dressed.—This breed of hogs have short limbs, are remarkably square built, and will fatten well, at at any age; they are more in demand with us, than the other breed, on account of the smallness of their bone, square form, and delicacy of their meat, joined with the importance of taking on fat well at any age. The weight of Mr. Johnston's hogs, however will not pass for a standard to judge of our Bridgeton pig by. Let me know which to send you, or whether you would prefer the mixed.

With respect to the Foxite potato, I can truly say, that they deserve all the commendations you have heard of them—they are certainly the finest potato cultivated in this country, remarkably white and mealy, and to use the expression of a gentleman, with whom I was conversing on the subject, and who has raised them for some years, "they are as much superior to all other potatoes, as the best superfine wheat flour is to common rye flour;" the only objection to them is that they are poor bearers, and yield so badly as to discourage their cultivation. We grow another potato, introduced here by Mr. Johnston, called the Mercer potato, which is next in repute for the table, and yields bountifully. But as much depends upon the manner of cooking them, many potatoes are spoiled in the cooking. They should be cooked by steam, and as soon as done, removed from the fire, for if suffered to remain the shortest period afterwards, they are injured.

Your's respectfully,
EPHRAIM BUCK.

John S. Skinner, Esq.

N. B. As a satisfaction to yourself, and not for the public eye, we have no doubt but the pig will weigh when killed and dressed, from 8 to 9 hundred—say 850 lbs.*

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* A good guess this, as he turned out to weigh 866 lbs.—*Edit. Am. Farmer.*

* * *

Bridgeton, West New Jersey,
March 5th, 1823.

Mr. Skinner,

In No. 48 of the Farmer I observe that a very important error, has been made in noticing the fine Heifer, slaughtered by Mr. Lewis Davis of this county; she is there said to have been raised and fattened in *Pennsylvania*—we are willing to give the "devil his due," but are by no means willing that Pennsylvania should have the credit of *all* our extraordinary productions, which it is very certain she has been accustomed to receive. I feel assured you will correct the statement, and place the honor where it belongs. So much for the Heifer, and now for the Pig.

The Bridgeton Pig, owned by Mr. Norton Harris, was slaughtered yesterday, and weighed and measured as follows:

Weight alive, 975 lbs.

Weight when dressed, having all the offal, together with the gut fat, neatly taken out, and after having hung up, exposed to the sun and a drying wind, from 7 o'clock, A. M. until 2 o'clock P. M. 866 lbs. gut fat 26 lbs. making together 892 lbs.

He measured from the end of his nose, to the root of his tail, 7 feet.

From the end of his nose to his ears, only 9 inches.

Girth round the neck, close behind the ears, 5 feet.

Girth round the neck, close before the fore legs 6 feet.

Girth round the body close behind the fore legs 7 feet 3 inches.

Girth round the body in the thickest part 7 feet 8 inches.

Height, 3 feet 2 inches.

Breadth across the shoulders 2 feet 5 inches.

Age 1 year 8 months and 22 days.

In No. 41, Vol. 2, of the Farmer, I find an account of the weight of a Hog raised by Mr. Wheaton, in this county, extracted from the Archieves of useful knowledge, in which there has evidently been a mistake either in the original work, or in the extract; in the next page I find another account, which would be the true one, only that the two first figures are transposed, and the 8 is where the 3 should be, his true weight was 834 lbs. in which is included the leaf fat.

Your's Respectfully,
EPHRAIM BUCK.

THE FARMER.

BALTIMORE, FRIDAY, MARCH 14, 1823.

WAR IN EUROPE.

A late arrival at New York, brings news of War between France and Spain. The tone and attitude assumed by Spain, towards France and her un-holy allies, induces us to belive that Spain must have strong assurances of support from England, and of the co-operation of Portugal.—In that case, the war will be protracted, and the final issue of it very doubtful.—We shall soon see the effect, which this new state of things abroad, will have on the price of American produce.—That effect will be greater, and more propitious for us, should England embark in the contest. What a satire on the boasted philanthropy of human nature, that we should derive gratification from the news of war and bloodshed!!! Yet who can deny the fact? Our readers will be kept precisely apprized of any changes which may occur, in the prices of the commodities usually reported in the American Farmer.

* * *

SEED—ROSE CUTTINGS &c. received lately for distribution—from Europe, and from five different states.

Spanish Tobacco seed, varnish leaf, and mullen leaf, from Mr. Barkley, of Charles county, Md.

Kite foot tobacco seed, from Dr. Kent, Prince Georges county, Md.

*Persian melon seed, from Mr. Jay, of N. York.

*Guinea Grass seed, from W. R. Bull, Esq. of Barnwell District, S. C.

*Several varieties of Grape seed, and other seed from France, from Peter Minor, Esq. of Charlottesville, Va.

Corn, which produced 136 bushels per acre, and a beautiful sample of Maple Sugar, from R. H. Rose, Esq. Silver Lake, Susquehanna Co. Pa.

Bread and Hominy Corn, from Peter K. Davis, Esq. Warrenton, N. C.

Cherokee rose cuttings and seed, and Magnolia seed, from Charles E. Rowan, Esq. of Charleston, S. C.

*Those marked thus * have all been distributed.*

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $7 25—Howard st. Superfine, $6 62½—Wharf, do. 6 12½—Wheat, white, $1 35 to 1 40—Red do., $1 32 to 1 35—Rye, 71 to 75 cents—Corn, 60 to 62 cts.—country Oats, 43 cents—Beef, live cattle, $5 to $5 50 per cwt.—Beef, 8 cents per lb. —Bacon, round, 10 to 11 cts. Other articles same as last week.

THE AMERICAN GARDENER.

CHAPTER VI.

FLOWERS.

Of Flowers, and of Ornamental Gardening in General.

[CONCLUDED.]

350. GUELDER-ROSE.—-This is called here the *Snow Ball tree.* It is raised either from layers or suckers. Its bloom is of short duration; but for the time, makes a grand show in a shrubbery. The suckers of it ought to be dug clean away every year.

351. HAWTHORN.—This tree has been amply described in Chapter I. under the head of Fencing. Sometimes it is called Hawthorn, and sometimes White-thorn.

352. HEART'S-EASE, or *Pansey.*—A beautiful little *annual*, which has great varieties, and all of them pretty. It blows all the summer.—It may be sown in the fall, without any care about covering the ground; but, it must not *come up*, in this country, till spring.

353. HEATH.—The common English heath is hardy, but ugly. The *Heaths* from Africa are of infinite variety. Insignificant in flower, however, and must be housed in Winter. They are propagated from seed, or from slips, and will last a long while. A few in a green-house are pretty; and they look gay in winter.

354. HOLLYHOCK.—This is a fine showy plant for a shrubbery. There are double and single, and none but the double should be cultivated. It may be raised from seed, or from offsets. If the former it does not blow till the second year. It will remain in the ground many years, and is perfectly hardy.

355. HOLLYHOCK. (Chinese).—This is a more tender and far more beautiful kind than the common. It is raised from seed only; blows the second year, and *only* that year. It is, therefore, a *biennial.*

356. HONEYSUCKLE.—This, amongst all English shrubs, is the only rival of the Rose; and, if put to the vote, perhaps as many persons would decide for one as for the other. Its name indicates its sweetness of *taste*, and the smell is delightful almost beyond comparison. The plant is also beautiful: it climbs up houses and over hedges; it forms arbors and bowers: and has a long-continued succession of blossoms. It grows wild in all parts of England, in many parts covering the hedges and climbing up the trees.—There is little variety as to sorts. That which is cultivated has a larger and deeper-coloured bloom, but the wild has the sweetest smell.—It *may* be propagated from seed; but always *is* from cuttings; put into the ground in the spring, and treated like other wood-cuttings. See Paragraph 275.

357. HYACINTH.—This is a *bulbous rooted* plant, and, like all the plants of that class, is *perennial.* It may be raised from *seed:* but, as in the case of the Auricula and many other plants, it is many chances to one, that, out of a whole bed, you do not get a good flower; and, perhaps, it is a hundred to one that you do not get a flower to resemble the mother plant.—Therefore, none but curious florists attempt to raise from seed. The roots are propagated from off-sets; that is to say, the mother root, while it is blowing, sends out, on its sides, several young ones. The old root, young ones and all, are put away in a dry place, out of reach of severe frost, till spring. Then, when you plant the old one out to blow again, you take off the young ones and plant them also. They do not blow the first year, and, if weak, not the second. But, in time, they do; and then they produce offsets.—This is the way the Hyacinth is multiplied. It is a fine and fragrant flower; it blows early, and will blow well even in glasses in a room; but better in earth. A fine flower for a green-house, where it would be out in full bloom while the snow was on the ground.

358. JASMIN.—Has the merit of a very delightful smell, and that only. Its leaf and flower are magnificent. It climbs, however, and is good to cover bowers. It is easily raised from *cuttings.* See Paragraph 275.

359. JONQUIL.—An elegant and sweet smelling bulbous rooted plant. Propagated, and cultivated in all respects, like the *Hyacinth*, which see.

360. KALMIA.—An evergreen shrub of great beauty, and of several varieties, great quantities of which are seen in most of the rocky woodlands of this country.

361. KILL-CALF.—Mentioned in Paragraph 328, which see. It is a dwarf shrub, and may be raised from seed, or from suckers. It is very pretty. When in bloom it resembles a large clump of Sweet Williams. It is so pretty that it is worth having in the green-house, where it would blow, probably in April, in Long Island.

362. LABURNHAM.—This is a tall and beautiful shrub, loaded, when in bloom, with yellow blossoms, in chains; whence it is sometimes called the *Golden Chain.* I sent one out to Pennsylvania in 1800; but, though *alive* now, it has never got to any height, and has never borne blossoms, being continually nipped by the winter. That it will grow and thrive in this country is, however, certain; for I saw two very fine trees in grand bloom in the garden, between *Brooklyn* and the Turnpike gate, last spring.—It is raised from the seed as easily as Indian Corn is.

363. LARKSPUR.—An *annual* of no smell, but of great variety as to colours, and, when in a clump, or bed, presenting a great mass of bloom. There is a *dwarf* and a *tall* sort. The dwarf is the best. There is a *branching* kind, which is good for nothing.

364. LILAC.—Desirable for its great masses of fine large bunches of bloom. There is the White, the Blue, and the Reddish. It is propagated from *suckers*, of which it sends out too many, and from which it should be kept as clear as possible. It is an ugly shrub when out of bloom. The leaves soon become brown. Therefore, there should be but few Lilacs in a shrubbery.

365. LILY OF THE VALLEY.—This the only Lily that I should like to have. It is a pretty little dwarf plant, that thrives best in the shade, where it produces beautiful blossoms of exquisite sweetness. It is a *bulbous root*, and propagated from offsets.

366. LOCUST.—Well known, and sufficiently noticed in Paragraph 329. It may be raised from *suckers;* but best from *seed*, which always makes the *straightest trunk.*

367. LUPIN.—A species of *pea* or *tare*, and frequently cultivated in the fields, and eaten in soup and otherwise, by the Italians, and in the South of France. It grows, however, upon a siff stem, stands upright, and branches out, like a tree in miniature. There is a great variety of sorts, as to colour of flower as well as to size of plant. The *Yellow dwarf* is the best, and it smells very sweet. This plant, is, of course, an *annual.*

368. MAGNOLIA.—One of the finest of the *laurel* tribe. It can be raised from seed, or from *layers.* A very fine shrub indeed. There are several varieties of it.

369. MIGNONETTE.—-An *annual* that bears abundance of seed. The plant and the flower do not surpass those of the most contemptible weed; but the flower has a very sweet smell. It may, if you have a green house, be had at any time of the year The plants may stand at four or five inches asunder; but, if they stand thicker, the bloom is inferior, and does not last so long.

370. MORNING STAR.—This fine shrub has been sufficiently described in Paragraph 329. It can be raised from seed, or from layers.

371. MYRTLE.—The Myrtle is a native of climates where it is *never cold.* It will not endure even November *all out*, in Long Island.—To have it, therefore, it must be housed in winter. It may be raised from seed, cuttings, slips, or layers. The leaf of the Myrtle has a fine smell; and, when the tree is in bloom it is pretty. But, it is a *gloomy looking shrub.* One Geranium is worth a thousand Myrtles. The broad-leaved Myrtle is the best in every respect and especially because it is easily brought to *blow.*

372. NARCISSUS.—A bulbous-rooted plant, managed precisely like the *Hyacinth*, which see. It blows early, is very beautiful, and has a delightful smell. Nothing is easier than the propagation and management of flowers of this tribe, and few are more pleasing. The Narcissus is a very nice thing for a parlour, or a greenhouse.

373. PASSION-FLOWER.—So called because the flower has a *Cross* in the middle, and *rays*, resembling *a glory*, round the edges of it. It is a singularly beautiful flower. The plant is also beautiful. It is a *climber*, like the Honeysuckle; and, like that, has a succession of blossoms that keep it in bloom a long while. It is raised from *cuttings*, which, treated as other cuttings are, easily take root.

374. PŒONY.—A *perennial* that may be raised from seed or offsets. A grand flower for shrubberies. Each flower is usually as big as a tea-cup, and one plant will sometimes produce twenty or thirty.

375. PEA (Sweet.)—There are a great variety in the *annual* sorts as to colours of blossom, and, there is a *perennial* sort, called *everlasting pea.* This stands, of course, year after year,—The others are sown and cultivated like the common garden pea. They should have some sticks to keep them up. This is a very *showy* flower, and remains in bloom a long while.

376. PINK.—This flower is too well known to need describing here. There are a great variety of sorts, as to the flower; but all are cultivated in the same way; exactly as directed for the *Clove*, which see. The Pink root will last a great many years; but, the flower is seldom so fine as the first year of the plant's blowing.

377. POLYANTHUS.—Every thing that has been said of the *Auricula* (which see) may be said of the Polyanthus. It is a very pretty flower, and universally esteemed. It blows finest out of the *hot* sun. Polyanthuses are best in *beds;* for a great part of their merit consists of the endless *variety* which they present to the eye.—The Polyanthus has a delicately sweet smell like that of the Cowslip.

378. POPPY.—A very bad smell, but still is to be sought for on account of its very great variety in size, height and in flower; and on account of the gayness of that flower. The seed pods of some are of the bulk of a three pounds weight, while those of others are not so big as even a small pea. The smallest, however, contains a *thousand seeds*, and these come up, and the plants flourish, with very little care. A pretty large bed, with two or three hundred sorts in

it, is a spectacle hardly surpassed in beauty by any thing in the vegetable creation. It is an *annual*, of course. It is well known as a *medicinal* plant; but, it is not so well known as a plant from the seed of which *sallad-oil* is sometimes made! The Germans, on the Rhine, cultivate whole fields of it for this purpose. It may be as well, therefore, for us to take care not to use German Sallad-Oil, which, however, can with great difficulty be distinguished from oil of olives.

379. PRIMROSE.—A beautiful little flower of a pale yellow and delicate smell. It comes very early in the spring; and continues a good while in bloom. Of the fibrous rooted flowers it is the next to the Daisy in point of earliness.—It is an universal favourite; and, in England, it comes abundantly in woods, pastures and banks. It is *perennial* like the *Cowslip*, and is propagated in the same manner. How beautiful a Long-Island wood would look in *April*, the ground beneath the trees being decked with Primroses!

380. RANUNCULUS.—Is a flower of the nature of the *Anemone*, which see. It is propagated and cultivated in the same manner. These two flowers are usually planted out in beds, where they make a very fine show.

381. RHODODENDRON.—It never occurred, perhaps, to any American to give this fine name to the laurel with a long narrow leaf and great bunches of blue, pink, or white flowers, the balls, or pods, containing which appear the year before the flower. It is, however, a beautiful shrub, and not less beautiful on account of its frequently covering scores of acres of *rocky sides of hills*, or on account of English Gardeners believing that it requires *bog-earth* (though fetched from many miles distance, at vast expense) to make it grow and blow!

382. ROSES.—A volume larger than this would not describe the differences in all the sorts of this, which has for ages, been considered as the Queen of Flowers, the excellences of which to attempt to describe would be to insult the taste of every reader. I shall, therefore, merely speak of the propagation and the management of the plant. All roses *may* be propagated from *seed*; but, as the seed seldom comes up till the *second year*, and as the plants come to perfection slowly, the usual mode of propagation of all sorts, except the *China Rose*, is by *suckers*. These come out near old stems, during the summer; they are dug up in the fall and planted out. In the spring they are cut down near to the ground, and, the next year, they blow.—The *China Rose* is so easily raised from *cuttings*, and little bits, put in the ground in spring, will be trees, and have a profusion of bloom before the fall. This Rose is in bloom in England, from *May till January*, if the soil and situation both be good.—It is very strange that Mr. Marshall should set this down amongst "*tender shrubs*," and say, that "it will not do *abroad*, except in "*summer months*." It stands the winter as well as the *oak*, and, I have, for years, had it, against the front of my house, *blowing finely at Christmas*, without any attempt at covering. In America, in the open air, it might not be in *bloom* at Christmas; but it stands the winter as well as any tree that can be named. It is beautiful for the Green-house; for there it, mixed with Geraniums, blow beautifully all the winter long. As to the management of roses; the ground should be good, and dug every autumn as directed for fruit trees, and should be manured frequently. They should (except when trained against walls or over bowers) be kept cut down *low*; for, when they get long stems and limbs, they, like peach trees, not only look ugly, but bear but few flowers, and those very mean ones. They should, therefore, be cut to within a foot, or less, of the ground; and all dead or weak wood should be pruned out close without leaving any ugly stubs.

383. SIBERIAN CRAB.—This Shrub is, by some, esteemed for its *fruit*, of which they make a conserve, more, I imagine, to gratify the sight than to gratify the palate. But, as a *tall shrub*, it yields, for the time, to very few. There is the red-blossomed and the white-blossomed.—The branches of both, when in bloom, present ropes of flowers, while the trunk, the limbs, the branches and the leaves are all delicate in form and in hue.

384. SNOW DROP.—Is the *earliest* of all flowers. In England it blows in January. Once in the ground it is not very easy to get it out again. Nothing but *carrying it away*, or actually consuming it with fire will rid you of it.—No sun, not even an American sun, will kill a Snow-Drop bulb, if it *touch the ground*.

385. STOCK.—There are *annuals* and *biennials* of this name; and, if I were to choose amongst all the annuals and biennials, I should certainly choose the *Stock*. Elegant leaf, elegant plant, beautiful, showy, and most fragrant flower; and, with suitable attention, bloom, even in the natural ground, from May to November here. The annuals are called *ten-week* Stocks. And of these there are, with a pea-green leaf, the *Red*, *White*, *Purple*, and *Scarlet*; and, then, there are all the same colours with a Wall-flower or Sea-Green *leaf*. So that there are *eight* sorts of the annual Stock.—Of the *biennials*, there are the *Brompton*, of which there are the *Scarlet*, and the *White*; the *Dutch*, which is *Red*; the *Queen's*, of which there are the *Red* and the *White*; and the *Twickenham*, which is *Purple*.—As to propagation, it is, of course, by *seed* only. If there be nothing but the natural ground to rely on, the sowing must be early; the earth very *fine* and very *rich*.—The seed is small and thin, and does not easily come up in coarse earth. If the plants come up thick, thin them, when very young. And do not leave them nearer together than six inches. They, however, *transplant very well*; and those that have not place to blow in may be removed, and a *succession* of bloom is thus secured. If you have a green-house, glass frame, or hand-glass, you get flowers six weeks earlier.—The *biennials* are sown at the same time, and treated in the same way. They blow the *second year*; but, if there be great difficulty in preserving them, in the natural ground, through the winter in England, what must it be *here!* Indeed, it cannot be done; and yet, they are so *fine*; so *lofty*; such masses of beautiful and fragrant flowers; and they continue so long in bloom, that they are worth any care and any trouble. There is but one way; the plants, when they get ten or a dozen leaves, must be put into flower-pots. These may be sunk in the earth, in the open ground, till November (Long Island,) and when the sharp frosts come, the pots must be taken up, and placed *out of the reach of hard frost*, and where there is, however, *sun and air*. When the spring comes, the pots may be put out into the natural ground again; or, which is better, the balls of earth may be put into a hole made for the purpose; and thus the plants will be *in the natural ground to blow*. In this country they should be placed in the *shade* when put out again; for a very hot sun is apt to tarnish the bloom.

386. SYRINGA, or *Mock-orange*—A very stout shrub, with blossoms much like that of the orange, and with a powerful smell. It is propagated from suckers, of which it sends out a great many.

387. SWEET WILLIAM.—A very pretty flower. Makes a fine show. Comes Double by chance; and is very handsome whether double or single. It is propagated from seed, the plants coming from which do not blow till the *second year*. The Sweet William root does not last many years. It *may* be propagated by parting the roots; and this *must* be done to have *the same flower again to a certainty*, because the seed do not, except by *chance*, produce flowers like those of the mother plant.

388. TUBEROSE.—This is a bulbous-rooted plant that sends up a beautiful and most fragrant flower. But, even in England, it cannot be brought to perfection without artificial heat in the spring. If got forward in a green-house, or hot-bed, and put out about the middle of June, it would blow beautifully in America. It is a native of Italy, and the roots are brought to England and sold there in the shops. It is propagated and managed precisely like the *Hyacinth*, which see.

389. TULIP.—Beds of Tulips vie with those of *Carnations* and *Auriculas*. They are made *shows* of in England, and a single roots is sometimes sold for two or three hundred guineas.—And, why not; as well as make shows of *pictures*, and sell them for large sums? There is an endless variety in the colours of the tulip.—The bulbs, to have the flowers fine, must be treated like those of the *Hyacinth*. The tulip may be raised from *seed*; but it is, as in the case of the Hyacinth, a thousand to one against getting from seed a flower like that of the mother plant.

390. VIOLET.—This is one of the four favourites of the Spring in England. It is a little creeping plant, that comes on banks under the shelter of warm hedges. The flower is so well known to excell in sweetness, that, "*as sweet as a violet*," is a phrase as common as any in the English language. There is a *purple* and a *white*. Abundance of seed is borne annually by both; and the plant is perennial. If you propagate from seed, the flower does not come till the second year; but, one plant, taken from an old root, will fill a rod of ground in a few years.—There is a little plant in these woods in Long Island, with a flower precisely like that of the purple violet; but, the leaf is *a narrow oblong*, instead of being as the English is, in the shape of a heart; the plant does not creep; and the flower has *no smell*.

391. WALL-FLOWER.—It is so called, because it will grow, sow itself, and furnish bloom in this way, by a succession of plants, for ever upon old walls, where it makes a beautiful show. It bears abundance of seed, plants from which produce flowers the second year. Some come *double*, sometimes. If you wish to be sure of double flowers, you must propagate by slips of double-flowering plants. There are the *yellow* and the *mixed*, partly yellow and partly red.—All have a delightful smell, blow early, and are generally great favourites. I am afraid this plant, even with covering, will not stand the winter out of doors in America, unless in the south front of a building, and *covered too* in severe weather; for, even in England, it is sometimes killed by the frosts.

"BRIGHTON AGAINST THE WORLD."

Henry Merwin, of Brighton, on a wager of $10, went into the woods on Saturday last, and cut and corded one cord of four foot wood in *fifty five minutes!!* Mr. M. selected two beach trees, about half a cord each, which he fell, cut, split, and corded, in 55 minutes. This is an instance of despatch altogether unprecedented in the annals of chopping.

NATURE OF ANIMALCULES AND PHYSIOLOGY OF PLANTS.

Middletown, Kentucky, Jan. 22d, 1823.

JOHN S. SKINNER, ESQ.

Dear Sir—In your last communication to me you state, that you have not met with the late discoveries and observations of Mr. John Bywater, of Liverpool, on animalculæ infusoriæ. and on the physiology of plants. Herewith I transmit you a copy of one of his papers, as published in the travels of the much famed English botanist John Bradbury, F. L. S., corresponding member of the Liverpool philosophical society, and honorary member of the literary and philosophical society of New York, United States. This gentleman performed his travels in America in 1809, 10 and 11—and published them at Liverpool in 1817. In this work you will find the new and curious theory, treated on in the following communication, more fully explained.

Mr. Bradbury when on his tour through the United States, became so much attached to our republican institutions, that he removed his family to this country, and is residing in this village.

I am, sir, with much gratitude for the zeal and perseverance with which you pursue a subject that I think any country is to be benefited by, your friend, &c.

WM. CHAMBERS.

Observations on the nature of Animalcules, and principles of vegetable Physiology.

In my communication to you on the principles of vegetable physiology, containing some new opinions, chiefly resting on the evidence of what I considered strong analogies; but since that time, several new results have been obtained, which place these opinions on a more solid foundation. Having seen it observed by different writers, that the small capsules of the farina fecundans burst when they come in contact with water, and throw out a quantity of variously described matter, I was induced to make some microscopical experiments, under an impression that they contained animalcules, or would exhibit strong marks of vitality, as they seem to be the consummation of the vegetable process. In these experiments my expectations were not disappointed, as the farina of most flowers gives out an abundance of animalcules, somewhat similar to the very small ones we obtained in such vast numbers by the process of infusion. These results were obtained by putting a drop of water on a slip of glass, placed under the microscope, and then drop a little farina into the water; for, in a few seconds, a violent internal commotion commenced in the capsules, and they burst, emitting a quantity of glutinous looking matter, that manifested a high degree of animation, and presented some very curious objects for the microscope: in order to insure this beautiful variety, the sun must be bright, and the capsules so illuminated by an oblique light, as to give them a glittering appearance and the water a dark blue. When this is done, most of the farina, particularly that of the geranium, will be seen to throw out silver streams of beautifully animated matter; sometimes this matter will issue in straight lines, like streams of light, from which small portions of animalcules will detach themselves; and float about in various directions: From other capsules, these small animals are emitted almost on every side, and render the water a speck of scintilating matter.

When this sparkling matter is highly magnified, the animalcules appear like small opaque bodies, writhing about, and in some cases floating down a stream they create by the force with which they quit the farina. One of these capsules becomes a beautiful microscopic object, when the small animals issue with such force as to react on the capsule, and make it cross the field of view, as it leaves behind an animated stream These peculiar results will certainly afford an extensive field for microscopical inquiries; but when connected with the new views of vegetable physiology, perhaps they partake of a higher interest, as the circumstances attending these discoveries evidently show, that small animals not only exist in, and extend their race with, vegetables, but in all probability are the real sources of vegetable life. That those isolated collections of small beings are the chief agents in forming, by their secretions and instinctive influence, the embryo of a new plant, does not appear improbable; for if an accumulation of them can construct such delicate vegetable formations as the branching varticella, when acting under their aquatic character, why may we not suppose them capable of instinctively constructing the embryo of a new vegetable which is to be the abode of their future generations.

By the developement of one simple fact we are often led directly, or by some imposing analogy, to the knowledge of many others. The discovery that the capsules of the farina contained numerous small animals, suggested the idea that similar agents might be detected in the other parts of vegetables, though probably without any apparent motion. This supposition was found consistent with experiment; for if the delicate leaves of flowers and vegetables are highly magnified and illuminated, numerous minute cylindrical opaque bodies, similar to those we obtain from the farina, are found imbedded in almost every physical point of the leaves: a result which points out the probability that these small agents might be detected in the sap and juices of plants in a more active state. The correctness of this inference is likewise readily established. If the juices of vegetables are pressed out, and examined upon a slip of glass, we may observe that they abound with numerous small bodies, like those imbedded in the leaves, which writhe about in a most animated manner; thus proving by experiment what had been inferred only by analogy.

If, agreeably to this view of the subject, we contemplate the grandeur of an extensive forest, or even the more humble, yet not less pleasing variety of a beautifully enamelled meadow, and associate with this contemplation the idea that every leaf and flower is the habitation of myriads of sentient beings, we may perceive the end of that benevolence which seems to clothe the earth with herbs and flowers in such luxuriant profusion. Nor is the benevolence of this vast design more conspicuous than its wisdom; for had these countless myriads of little beings floated in every direction through the atmosphere in search of food, their excessive numbers would have counteracted the engagement of almost every other part of the animal creation; but under their present character, they enjoy the light and air of heaven without giving the least annoyance, and are supplied with food by the general laws of matter, acting on a curious organization they have instinctively established. Having detected these little agents in the farina, and found them imbedded in almost every physical point of a vegetable; having also, completely recognized their activity in the various juices of plants, it may be asked how far the different soils partake of this animated character, as the inquiry may lead to results intimately connected with the best interests of agriculture. To examine any soil agreeably to this view of the subject, it is necessary to place a little water on a slip of glass, or some transparent body, and drop a portion of the soil into the water, and then we shall be enabled to observe what comparative quantity of agents are given out by each soil, as they display sufficient activity to be discovered when the solution is stirred with any pointed body. From this assemblage of facts, we have the strongest evidence that the process of vegetation chiefly depends on secretions and instinctive influence of this numerous class of agents. It may be difficult to conceive how they direct such an extensive process, yet it is equally difficult to comprehend the nature of that directing energy, by which spiders form their various webs, or bees construct their curious hives:—it must be the unerring influence of divinity, which instinctively impels and guides these wonderful operations. Altho' I had often viewed the larger animalculæ infusoriæ, and considered them as congeries of still smaller animals, yet I had no idea of the form and character of the little agents which compose these congeries, until I examined them by a similar light to that applied to the farina, and then it was evident that numerous small bodies, similar to those obtained from the juices of vegetables, were lodged in almost every point of these mucilaginous lumps, and were the source whence their power of motion was derived.

When particles, and the larger animalculæ infusoriæ, are put into a little water, and the water so far evaporated as to impede their rapidity of motion, the individual energy of these little writhing bodies will appear extremely manifest, and impart to us a new idea respecting animal locomotion. The discovery of this new principle in the locomotive power of animals, in conjunction with several other particular results, connected with the animal economy, certainly involves questions of no trifling importance, which, if hastily pursued, might excite the fears of many, lest the bold and inconsiderate speculators should carry the inquiry too far: but we have little to dread on this account; for the better we understand the nature and character of the secondary agents, which the deity employs to accomplish the vast designs of his stupendous providence, the greater must become our reverential admiration of his unbounded wisdom and benevolence. If Mr. Buffon and his speculative friends, had ever attentively observed the playful activity some of the aggregate animalcules display, they must have concluded they were living beings, and not merely organic particles without life, moving by a species of mechanism. That the whole race of Polypes are living beings we have very strong evidence; for some of the sorticella induce a current to pass what is called their head, by the motion of small fibrillæ, and devour the smaller animalcules, which are brought in contact with them by this current, in a most voracious manner. The hydras also collect their food, and if they are fed with small red worms, cut into bits, the red substance of the worms may be seen dispersed through every part of the dydra, which in a little time becomes changed and assimilated to the general mass, except a small part, which is discharged, probably on account of its not being fit for that purpose; thus showing their powers of secretion, which are energies generally considered as inseparable from the principles of vitality.

Having shown that agregate animalcules secretive powers, and by a number of facts proved they are congeries of small animals, similar to those which abound in almost every part of a vegetable, we are furnished with a tolerable solution to what are termed vegetable secretions, as in all probability they are the supposed misterious agents by which these processes are carried forward; and as we can discover that these little agents increase in number in the agregate animalcules, we may, perhaps, by a fair analogy refer the hitherto unaccountable movement of sap in plants to this multiplying principle. Although these little agents have generally a strong resemblance to each other, yet those given out by the farina appear to differ in size when obtained from different flowers; therefore, future discoveries, and a more minute inspection, may show that they vary in other respects, as well as in the general outlines of their dimensions, and that even themselves are composed of a congeries of still smaller beings.

These agents are furnished by a variety of substances; for a little black ink or milk put on a slip of glass, or a bit of raw sugar dropped into a little water, are objects worthy of inspection; nor will a scientific brewer find a small portion of wort, in a high state of fermentation, an uninteresting object, as it will be found completely animated, though none or very few of these agents are to be met with in fine ale, as the greater part of them make their escape with the barm.

Some time ago I mentioned to you, it was probable that the beautiful plumage of the feathered tribe owed its designs and variety to an agency of this kind, as the various phenomena attending the growth of feathers bear such a strong analogy to many of the vegetable phenomena: since then I have found,. by inspection, that these little opaque bodies are inclosed in almost every part of the feather.

These, and numerous other results, open a wide field for investigation; but several circumstances have induced me to waive the inquiry for the present. Nevertheless, should you meet with any new and interesting facts in America, I shall be glad if you will send me a detail agreeably to your promise, the first opportunity, and believe me your's truly,

JOHN BYWATER.

Questions for naturalists who are in possession of high magnifying glasses.

What vegetables produce the most animalcules?

If it be red clover, how far are we indebted to that particular property for its fertilizing quality?

What composition of earth, or soil contains the most animalculæ?

W. C.

CRAB OR CROP GRASS.

Barnwell Dist. Duncansville, 27th Jan. 1823.

Dear Sir,—In No. 41 of the American Farmer 4th volume, page 327, I notice the request of John D. Legare, Esq. through the medium of your paper, to state what method has been pursued with the greatest success, for obtaining a crop of crab, or crop grass, when cultivated by itself; at what time the ground should be broken up, and what attendance is necessary, and what has been the produce.

Having made two little experiments, I offer them to you—probably it may be some satisfaction to your correspondent. My object was to procure a crop of the crow foot grass, to make hay. I had a small piece of ground less than a quarter of an acre, (as well as I remember about seven eights of ¼ of an acre,) it was good pine land, a little cow-penned, but not rich; this ground was ploughed, then cross ploughed, and harrowed over nicely; I then had the ground laid off, across the harrowing, 12 inches asunder, say in drills, with what we term a bull tongue plough; this was done in the latter part of May 1821. I then planted, soon after, about two quarts of crow foot grass seed, in those drills: and then covered it; it remained some time in the ground, so long, that I began to think this experiment would fail; I was however determined to see the issue. Crab grass came up very thick, but very little of the crow foot; it grew well, was thick and high, say an average of three feet, no attendance was given, and no protection save a good fence—I had it cut the last of August, or early in September; the reason I had it cut so soon was, that I was under the impression I might get two cuttings, but was disappointed, hence I infer (also from other experiments) it is always best to expect one crop only from the ground, without it should be such crops, as would have sufficient time to mature after the reaping of the former; this may be supposed, that I would be for encourging, or rather advising second cropping; if the ground is good you can effect two crops, if not you can make it good by a plenty of manure, which is easily made by attention, and without attention, nothing will prosper. I have a little digressed, but to the point; this grass was cut, three fourths at least was crab grass, the balance was crow foot; it was brought and spread thinly before my door, say in a large yard, it received the sun for three days, being also frequently turned, it received the dew of one night only, I examined it and thought it was sufficiently cured; had it housed, and six days after, I took two fellows with me and weighed it, the weight was eight hundred weight from the above piece of ground; I believe had I deferred having it cut a month longer, say October, it would have been at least 1000 lbs. it was as good hay and as bright a colour as I would ever desire on my plantation.

In the year 1822, I had about half an acre; this ground was ploughed, and cross ploughed, in about February; this also was a cow pen, but not well manured; nothing more than the ploughing was done, no seeding whatever; I did not have this piece cut until October; I was not particular in weighing it, but believe I made rather more in proportion, than the year previous; it is my opinion, if a southern planter wishes to make hay, the crab grass is the best he can turn his attention to, and I agree with Mr. L, has been sadly neglected. If any gentleman was to adopt the following plan, I have no doubt but he would succeed beyond his expectations—let him have two, three, or four acres, of *good* land; let him have it broke up well in January, or early in February, the former best, lay his ground off with a small plough 18 inches asunder, manure each drill with cotton seed, (fresh from the house best, no danger of the germinating quality of said seeds, affecting the crop, as the frosts will check all sprouts of the cotton seed,) say from 25 to 30 bushels per acre, then plant 1¼ bushels oats per acre, and cover both at the same time, as soon as the oats will bear a hoeing, give it; a fortnight or three weeks after plough it with a small flake plough, without mould boards, this would be preferable to a hoeing, inasmuch that it would not only destroy what young grass or weeds may come, but it pulverises, and hill the earth nicely to the young roots, and stalks of the oats; a fortnight or three weeks after, repeat the same, if the ploughing cannot be conveniently done, a hoeing may answer, but I'd remark, it makes this difference, in the first place, it is more expeditious, for a boy and horse can plough at any rate, two and a half acres of oats, 18 inches drills, in a day, and I think it is a common allowance to give a hand only one acre of oats per day, as a task, or day's work, I have never given more. In the second place, I believe ploughing oats will have a tendency to promote a greater yield; this will be all the tillage requisite for the oat crop; as soon as the oats is ripe, (and let the planter not wait till it be dead ripe,) have it cut, and have your ground as soon after as possible, ploughed, and cross ploughed, then raked with a horse rake, (see American Farmer 3d volume page 135,) so as to have your ground as near as possible freed from stubble; let your ground remain in this state; it will be perceived all this can be effected by the 20th June, if the seasons be favorable—you'll then have time for a full crop of crab grass. If this plan was pursued, I have no doubt you'd not only obtain a full crop of oats, but also about 3000 lb. of good hay per acre, and should you deem the above in any way satisfactory to your correspondent, you can dispose of it in any way you think proper.

I am, Sir your's,
Very respectfully, &c.
W. R. BULL.

John S. Skinner, Esq.

TO THE EDITOR OF THE AMERICAN FARMER.

TO DESTROY VERMIN ON HOGS, HORSES AND SHEEP.

In vol. 4, No. 48, A North Carolina farmer answers the enquiries, respecting vermin on hogs, which were propounded in vol. 3, No. 47. He recommends TAR.—If instead of tar you take lamp oil, and rub it on when the hog is clean, it will destroy both lice and knits. Hogs should be kept without litter, except in extreme cold weather, when clean straw should be furnished twice a week. In summer hogs should at all times have water where they can wallow, and they will keep on a coat of mud so as to prevent fleas or flies from being troublesome.—The same Farmer requests information respecting vermin on horses, cattle and sheep. For horses—first clean your stables and whitewash every part, then card the animal and brush him well with a hand brush, so as to get the skin clean—take the fat of boiled bacon, while soft, and rub it all over with the hand or hand brush; tie him short, so as to prevent his turning round his head (or he will lick the fat off), litter with clean straw and burn it in the morning, lead the horse to water and take care he does not roll—in three days repeat the rubbing, with the same precaution as to tying and rolling. The vermin burrow between the outer and inner skin, eat off the roots of the hair, and this occasions itching, which causes the animal to rub off his hair against trees and fences. Cleanliness and good keeping is the greatest safeguard against disease and vermin.

With respect to sheep, nothing can be done except you shear them, which may be done at any season, taking care to keep them housed in cold weather and rain; after shearing, rub them well with soft soap; they will be clear and clean in a few days. If the vermin adheres to the fleece, take a flour barrel without heads, dig a small hole in the ground, put in tobacco stems and saw dust, set it on fire, place the barrel over the hole with a few smooth sticks over the upper end of the barrel, and spread your fleece over the sticks, sheer side down, and in a few minutes the smoke will clear off every species of vermin.

Bucks County, 6th March, 1823,

QUERIES RESPECTING A NEWLY INVENTED HEMP BREAKER.

Kenanowen, near St. Louis,
January 31st, 1823.

Dear Sir,

Any information you can give on the subject of the following resolutions, particularly as to the price, probable bulk and weight of the machine; where, or of whom to be had, will be thankfully received.

"Resolved, that the committee of correspondence be requested to ascertain and report to this "Society at its next meeting, all the correct "information they can obtain respecting the "machine lately invented for breaking hemp, "of which some description has been published "in the newspapers: and that they correspond "in the name of the Society, with the members of "other Agricultural Societies, or such others as "are likely to give them information on the "subject."

As a member of the above named committee, and in the absence of the other two members, I take the liberty of addressing you on this subject, although I am aware of the probability that the most if not all the information you possess on this and similar subjects, is imparted to the public through the means of the American Farmer. If, however, in either of the above particulars you can afford to our Society any information, which is not to be found in your valuable journal, we hope you will do so—or that you will have the goodness to direct us to the source whence such information may be obtained.

I am, very respectfully,
Dear Sir, your obedient servant.
WILL. C. CARR.

J. S. Skinner, Esq.

The Editor does not know to what particular publication the Society here alludes. But he hopes the publication of their resolution will call forth from the proprietor of the machine in question, the information desired. He begs the favor of his subscribers to call to the subject the attention of any person who may be likely to possess the means of answering the inquiries. In the mean time, he has written to a distinguished publick spirited agriculturist of New York, who is joint proprietor of a flax breaking machine, and the hope is entertained that from him a communication will be received, which may be valuable to a great number of our friends in the west, who are turning their attention to the culture of hemp and flax.—*Edit. Am. Farmer.*

* * *

From the last November number of the Edinburgh Farmer's Magazine.

A SUBSTITUTE FOR DRILLING, BY MEANS OF A BLOCK PLOUGH.

Sir,

Having first read, in your 22d volume, an account of dibbling corn as a substitute for drilling, it may be of some use to inform you, that I have, for several years past, put in my wheat crops with what I call a block plough; making three seed furrows with one horse at the interval of nine inches, and making the ridges so sharp, that, upon the bush harrowing which follows, all the seed inevitably falls into the furrow, and the land has the appearance of being sown with the most perfect and accurate drill. I can sow, in this manner, four or five acres a day in clay lands and wet seasons, when the drill will not act. My instrument is an equi-angular triangle of about 30 inches to a side, with cast iron scuffler teeth, and wooden blocks slipped over them. The whole expense of the instrument does not exceed 20 shillings. The seed is sown broadcast, after the whole field is ribbed with the block plough It is the most simple, rapid, economical, and useful implement in husbandry with which I am acquainted.

S.

* * *

In the year 1823, there will be six eclipses, namely four of the sun and two of the moon; one of the former, and both of the latter will be visible in this country, those of the moon being total and very large.

NEW OBJECTS TO WHICH THE FARMER MAY PROFITABLY TURN HIS ATTENTION.

More than once we have spoken of the profitless monotony which marks the habits of most of our land holders; they go on, year after year, cultivating the same two or three articles, with no variation in the modes of tillage, and little in the price of the commodities, in the belief that other articles may be brought into view, and that their history, culture, and uses will prove entertaining even though they may not be profitable. We give below some remarks on the cultivation of Teazles, a very curious vegetable production used for raising the nap on woollen cloth, and for which human ingenuity can devise no artificial substitute.—*Edit. Am. Farmer.*

From the Statesman.

CULTIVATION OF TEAZLES.

As the season is approaching when the spring planting will commence, I have presumed through the medium of your excellent paper, which I observe is devoted to every subject that can subserve the interest of the agriculturist, merchant, and manufacturer, to call the attention of the former to the growth of the cardicia fullanium, or fuller's teazles.

They are employed for raising the nap on woollen cloth, and no other material can be used as a substitute. It is a biennal plant, and there is some uncertainty in obtaining a crop; but when planted in a suitable soil and properly cultivated the chance is three to one in favour of a successful result. The crop, in England is sometimes fourteen or more packs to the acre, and at other times scarcely any. When cut they are sorted into three different kinds—into kings, middlings, and scrubs—they are then made into packs, the kings containing nine thousand, the middlings twenty, the third or scrubs, are not considered as of any value.

The demand for teazles in this country is already considerable, and is daily increasing. Some manufacturers are now consuming more than three hundred thousand per annum. Supposing that ten packs were the produce of an acre of land, and the market price were only twenty-five cents per hundred, the cultivator would realize from the acre four hundred and seventy-two dollars fifty cents, deduct from this for rent, labour, &c. and it will be seen that no other crop can prove so profitable to the farmer.

"The soils most adapted to the growth of this plant, are those of the more strong and deep kinds; but which are not too rich, as loamy clays and such as have strong marly bottoms, and are fit for the growth of wheat crops."

"The most favorable situations are those that are rather elevated, open, and incline a little to the south; and the higher grounds, particularly where the country is inclosed, are the most advantageous."

"For the preparation of the ground, where it is a lea, it should be ploughed up deeply in the early part of the year; and where it is inclined to moisture, it should be executed in narrow ridges of not more than three bouts each."

"In the providing seed it should be constantly taken from such plants as are the most perfect of their kind, and the most productive in heads. It should be suffered to remain till it becomes perfectly ripened, and be used while fresh."

"From one to two pecks are sufficient for an acre, some use three."

"The crop should be put in as early as the spring will permit. The common method is to broadcast, it being sown after the manner that is practised for turnips. Before sowing, the land should be well harrowed down in order to afford a fine state of mould as a bed for the seed."

"The land should be kept clean from weeds, the plants should be hoed out so as to leave them twelve inches apart, and have them well earthed up. When the blossoms fall the plants are ripe and in a state to be cut and secured. They should be cut with about nine inches of stem, and tied up in handfuls with some of the stems, On the evening of the day on which they are cut, they should be put into a dry shed, and should be exposed to the sun daily in clear weather, till they become perfectly dry; they should then be sorted and kept in a dry loft."

Having given an account of the manner of raising this plant in England, I shall offer some remarks on the mode of cultivating it in this country.

Those who cultivate them here, are not sufficiently attentive to the quality of the seed. Instead of taking it from fine heads, that have been permitted to ripen, they collect it promiscuously from those that have been collected for sale. As the teazle is cut for use when the blossom falls before the seed is ripe, the plants cannot be so vigorous as when taken from those heads, which have been permitted to ripen.

The choosing of a genial soil, and situation, together with keeping the crop clean from weeds, by good hoeing, is generally neglected by our farmers; all of which appear to be essentially necessary to insure a productive crop.

Those who cultivate them in this country, sow the seed in beds and transplant them in the fall. This system is highly objectionable, and is no doubt the principal cause of the frequent failure of the crop. The growth of the plants is checked by being transplanted, the roots will not descend to the same depth in the soil, and the winter comes on before they have recovered their pristine vigour; hence the cause of the plants being destroyed; either partially or altogether during the winter season.

Last year our crop was generally destroyed, and had not a supply been obtained from England the woollen manufacturers would have been much injured. In that country the crop is usually more or less productive, but owing to the moisture of the climate, is of little value. This was peculiarly the case with that of the year 1822. When the crop failed here last summer, manufacturers and merchants imported to supply the demand, but most that were brought in, having been bought there by persons totally unacquainted with the article, the damaged teazles of the crop of 1822 were sent out, which have proved a dead loss to the manufacturers who purchased them. I have seen only one lot that can be considered a prime article, and those were bought of Messrs. Divie Bethune & Co.

As this country appears to be destined to become the seat of manufacturers, it would be well for our agriculturists to turn their attention to the raising of such crops as will supply the new demands thereby created. It would require more than sixteen thousand acres to raise all that is wanting for the present woollen establishments, and the demand will be annually increasing. Should you consider this article worthy an insertion, it may encourage me to send you other essays relative to the raising of articles now imported.

A MANUFACTURER
of Columbia County.

* * *

The exports from the City of Cincinnati alone, in the State of Ohio, in the fall and winter of 1821—22, are stated to have amounted, for three articles only (flour, pork, and whiskey,) to the value of $300,000.

FROM THE NEW ENGLAND FARMER.

Mr. Editor—I have been a reader of your paper ever since its commencement, and I now begin to think it is high time for me to make a communication to you, which I believe will be beneficial to my agricultural brethren, and if you are of the same opinion, you will please to publish it, or such part of it, as you see cause.

The subject which I propose, is that of the more extensive cultivation of Oats. Various are the kinds of oats. The Barley or Scotch oats, so called, I have cultivated, but not with very great success; their weight is generally about 42 lbs. per bushel.—I have seldom been able to raise more than from 20 to 25 bushels per acre The black oats I have cultivated; their weight is about 36 lbs. per bushel, and produce about as many bushels per acre as the barley or Scotch oats. The greatest objection I have to the barley or Scotch oats, is, that they must be harvested suddenly after they are fit, in order to prevent waste. The common oats which are raised, I consider preferable. My average crop of late years has been from 40 to 50 bushels per acre, and in one instance 65 bushels per acre.

I make oats principally, and generally speaking, my first crop in the line of a rotation of crops. I break up the piece intended for this crop in the fall, if possible, and in the spring cross plough and harrow thoroughly before I sow my grain; then harrow again until the turf is well pulverized; then sow ten bushels of clover seed chaff per acre, and roll it in. As soon as the grain is harvested, and the young clover has received its growth, I plough it in.—This clover with the stubble, is about equal to a common dressing of compost manure. In the fall plough, in the spring I cross plough, after taking from my compost heap thirty loads per acre, which are carefully spread. The lot then being well harrowed and furrowed is ready for planting, either with corn, potatoes, or turnips. This is my second crop. For my third crop I again sow wheat, peas, flax, oats, &c. and stock the lot down with herds grass and red top, which I believe make the best of hay. I let the lot remain in grass three years. Thus you will observe I till three years, and mow or pasture three years. My first and third crop is principally oats.

I have frequently been told that oats and corn were very impoverishing crops; but I find no difficulty in enriching my land as above stated. Ten years ago my average crop of corn was from 30 to 40 bushels per acre. But in passing over a lot the second time which was managed as above in the summer of 1821, I had the satisfaction of harvesting 96 bushels of corn per acre, and received the Society's premium. My other crops have advanced in about the same proportion.

The inquiry will naturally be made, what I do with my oats? Well, sir, after I have reserved for my stock and for seed, I take the remainder to my mill and manufacture them into flour and meal. It will be understood that the oats are kiln dried, then hulled about as clean as rice, then ground, and bolted or sifted, as the case may be. That which I bolt is calculated to be mixed with the wheat flour for bread; in which case the oat flour being kiln dried, must be scalded before it is mixed with the wheat flour, otherwise the bread will be too dry. Good oat flour prepared as above, mixed with wheat flour, half and half, will make as light and pleasant bread as common country wheat flour, and it will trouble good judges of bread to tell it from clear flour bread. Again, it is excellent to make butter-cake, by the Yankees called slapjacks. The oat meal is calculated for puddings, and is a substitute for rye meal to mix with corn meal for bread, or with rye meal for bread. In either case the oat meal must be scalded before it is mixed.

Thus, after supplying my family, the remainder is for market. The oat flour I have generally sold in Boston and New York to the druggists. The meal is also purchased by the druggists. I have generally sold them oat flour for from four to five dollars per hundred, and the meal from three fifty to four fifty, which is, by them, retailed as medicine, from twelve to twenty cents per pound.

The meal is frequently bought by foreigners by the barrel or hundred, for family use. The sale of oat meal is at present rather limited; the reason is that but very few people in this country save foreigners, are acquainted with the use of it, except for medicine. Foreigners generally prefer oat meal to flour. I really hope both for our health, and the interest of agriculture, that the time is not far distant, when oat flour or meal will be used in every family for food.

Much may be said as to the value of this article as medicine, as well as for food. It has been a common article for food in Scotland and Ireland for many years. Seldom, if ever, an English, Scotch, or Irish vessel sailed without a supply of oat meal; and I may say it would be well for every commander of an American vessel, in making up his order for ship stores, to include a sufficient quantity of oat meal or flour for his voyage.

As I am one of the homespun family, and wish for information, I hope these few remarks will draw something from more able writers.

I will, when I have leisure, inform the publick, through your paper, more particularly, as to the process of hulling oats and preparing the flour and meal, as well as to the construction of the mill and kiln. HENRY STEVENS.

Barnet, Vermont, Feb. 1823.

GRAPE VINES.

NEW METHOD OF PROPAGATING.

Extract to the Editor, dated Georgetown Post Office, 15*th March*, 1823.

I have broken open this letter to give you a piece of information that I think invaluable.—Mr. Hiel Peck, who has ever since I have known him, been an excellent horticulturist, has just informed me, that a German taught him to plant the cuttings of grape vines, in the following manner. Take a cutting of three eyes, and make a place by removing the earth, the same as you would to plant Indian corn in a hill, and lay in two cuttings, flat at the bottom, of three eyes each, and cover them in the same manner, as you would corn; and out of a considerable number that he planted in a border, scarcely one failed. His information he got from a German who informed him, it was the manner in which his father planted the cuttings.

If three eyes will answer, I can see no reason why two may not do as well. As I have sold a considerable number of cuttings this season, and being anxious that those who purchased, should succeed in their attempt at propagating the vine, I will thank you to recommend to the different newspapers, to give this publicity. If it succeeds, a cutting of 5 or 6 eyes or buds, will make two—and I can see no reason why they may not grow, better than in any other way. I shall try it this season by planting one cutting in the usual way, and another in this manner, in the same place; if they both grow, one may be removed.

JOHN ADLUM.

CULTIVATION OF GRAPES.

The Grape Vine not blooming till the greatest danger from frosts are over, and the fruit ripening at a time when the seasons are generally very hot and dry, and fevers predominant, makes it a desirable fruit to cultivate. Many persons having a notion that the tender kinds of grapes will not succeed out of the city, and the writer of this knowing that even in the city they do not all succeed without covering over the tops with earth, which is troublesome, and not calculated for very large vines, which can not be bent down to the ground, and also, as very large wood is cut off in some of the tender kinds, in very severe winters, I would suggest the following modes, viz:—Instead of raising by cuttings, purchase of some of the farmers some healthy strong vines, of not less than half an inch diameter, nor more if possible, than three-quarters of an inch near the surface of the ground of our common native grapes, and then obtain cuttings of such fine kinds as may be the most desirable to propagate, and ingraft them near the surface* of the ground in the mode called whip grafting,† which is to unite the bark exactly on each side of the graft and stock. Now, as the fine pores or vessels through which the sap flows, whether the sap be collected from the earth or atmosphere, must refine it more if a cutting be engrafted on another stock, than if it drew its supply immediately from the earth or atmosphere—therefore, it is presumed, that this mode of propagation would bring the fruit to as great perfection as respects the flavour, as any advantages of soil could do in Europe. I mention this circumstance because our native grapes sometimes are found in moist situations, near runs or creeks, growing very vigorously. But any advantage obtained in grafting, as respects the flavour of the fruit, would be of no consequence without this mode had a tendency to ripen the wood better, and thereby enable it to withstand the severity of the winter following. This, I have an idea, grafting will effect. If it does not, by taking off a few cylinders of Bark, of one-eighth of an inch diameter, (not more) when the sap runs freely in April, it will, probably, check the sap sufficiently for that purpose, and if the vines seem to bleed considerably after the operation, take some finely grated old cheese, and finely powdered quick lime, and make them up into a paste, and cover the parts therewith.—(Now is the time to take up native vines for experiments, observing to get them with all the roots uninjured if possible.)

The following paragraphs are selected from a British review of a recent "Journal of a Horticultural Tour through Holland, the Netherlands, and a part of France," by two Scottish gentlemen.

"The greatest novelty in Brussels, to our tourists, was the Frog-market; and as we do not recollect seeing it described in any other book of travels, we will extract the entire description, with all its decorative Scotticisms, for the satisfaction of our readers:

'In a lane hard by the green and fruit-stalls, we fell in with the Frog-market, which was a novelty to us. The animals are brought alive in pails and cans, and are sold by tale. The frog-women are arranged on forms like the oyster-men in the Edinburg fish-market, and, like them, they prepare the article for the purchaser on the spot: as the oysterwoman dexterously opens the shells with her *gully*, the frog-woman shows no less adroitness, although more barbarity, in the exercise of her scissors: with these she clips off the hind limbs (being the only parts used,) flaying them at the same time with great rapidity, and sticking them on wooden skewers. Many hundreds of the bodies of the frogs, thus cruelly mangled, were crawling in the kennel, or lying in heaps, till they should be carried off in the dust cart.

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* *Two days back I ingrafted a large vine for a Citizen, about ten feet from the ground, in the branches, putting in 7 grafts—whether it will succeed, it remains to be ascertained. Most of the grafts had left above them 2 buds on the branch to convey the sap better.*

† *A specimen of this mode of grafting accompanies this, and will be seen by untying it. One part of stiff Clay—one of Loam—one of fine Sand—and one of Horse Dung, for plastering round the Grafts; and coarse soft twine, well waxed with Bees wax, for tying up the Grafts.*—PHIL. PAP.

"We may mention, that the species thus used as food (Rana *esculenta*) has never been observed by us as a native of Scotland, though it is marked in natural history works as a British species. It is generally larger, and more arched on the back, than our common frog (Rana *tempordria*;) and the colour is rather green, while ours is rather yellow. We noticed, however, many specimens, perhaps males, marked longitudinally over the back with three faint yellow lines."

"Our worthy Caledonians do not inform us whether they ventured to taste a pasty made with these hind quarters, after the scene they witnessed. For our own parts, having been accustomed to contemplate nearly as much cruelty practised by the females who sell and skin *live* eels in London, we were easily prevailed on to partake of a frog pasty in Paris; and, in common with several of our countrymen who tasted it at the same table, we pronounced it to be, decidedly, the best of the French dishes. Frogs, however, are expensive, and a rarity even in Paris; and are only seen at the tables of the opulent."

NATIVE RACE OF CATTLE.

Mr. Asa Rice, jun. of Shrewsbury, in Worcester county, (Mass.) has brought to the Brighton Market the following cattle, all of his own raising and fatting, weighing, after being slaughtered, as follows:

	lbs.
A Steer, 4 years old, Feb. 10, 1821, slaughtered on the 11th October, same year,	1519
Slaughtered Feb. 2, a Steer, 4 years old, the 12th April,	1581
Slaughtered Feb. 2, A Cow 13 years old last spring,	1091
Slaughtered Feb. 2, A Heifer, 3 years old 14th May,	911

These cattle were wholly of native breed.—The steers were weaned at 12 weeks old, and fed with nothing but hay and grass until they entered their fifth year. The Cow brought a calf at two years old, and every year since but the last. She was milked last winter, turned out in the spring, thin in flesh, and began mealing the 1st of October last. The Heifer brought a calf at two years old, and another last spring; and was dried the last of July, and turned out, as thin as any other cow, and was fattened on account of a blemish which would eventually have spoiled her.

From the Richmond, Va. Compiler.

Messrs. Editors,

The following are the weight and dimensions of a hog raised by Mr. Bowler F. Cocke of Corles Neck, in this county. Gross weight, 710 pounds, net weight 630; length 7 feet 8 inches, height 3 feet 4¾ inches—weight of one ham 78 lbs.; shoulder 85 lbs.; middling 86 do.; head 54 do. 32 months old.

This hog, though not so large as the Mammoth hog lately the subject of a paragraph in the Richmond Enquirer, yet deserves to be noticed by the friends of domessic economy. Mr. Cocke's hog has not been raised in a stye; but during the summer months was subsisted exclusively on clover. The brother of Mr. C's. fine hog was killed at 15 months old, and weighed 555, not having been raised in a stye—any gentleman wishing to be supplied with a pig of this fine breed will be furnished by Mr. C. The writer of this article cannot forbear the expression of a wish, that Mr. C. will make, thro' the medium of the Agricultural Society, of which he is a member, a communication of his method of raising hogs.

GREAT CROP.

Messrs. J. and M. Pratt, of Eaton, Madison county, N. Y. raised the present year, from three acres of ground, the astonishing quantity of four hundred and ninety four and a half bushels of Indian corn; an average of one hundred and seventy two and a half bushels to the acre.

☞ Should like to see the vouchers!!

Edit. Am. Farmer.

THE NEWLY IMPORTED AMERICAN HORSES.

The public were informed of the speed of two American trotters, the property of Mr. Aldridge, some months ago, and it seems two others lately arrived, are superior in speed, and equal to 17 miles in one hour. They are the property of a gentleman named Beningborough; one of them was matched to do eight miles in half an hour on the Cambridge road on Thursday, and to carry 11 stone. The horse is an iron gray, rat-tailed, and is 16 hands high. The match was for 100 sovereigns at a week's notice, and the horse did the first mile in three minutes 30 seconds; the second, three minutes 29 sec.; third, three minutes 26 sec.; fourth, three min. 36; fifth, three min. 32; sixth, three min. 50; seventh, three min. 40; and eighth, three min. 52; making in the whole, 28 minutes and 55 seconds. The horse broke once in the sixth mile. The other horse was matched to trot 17 miles in one hour, for 200 sovereigns, on the same road.

Glasgow Herald.

A match of rather a novel nature was lately made betwixt two gentlemen of this city, which was decided on Saturday, on the Edinburgh and Glasgow roads, near Westcraigs. A young woman from the neighbourhood of Queensberry was to run fifteen miles against any Lanarkshire man. A lad turned out, in honor of the country, from Dalserf. For the first eight miles the lady took the lead, and finished them within the hour, but at this point her opponent, who had hitherto courteously kept in the rear, shot past. Upon this she made a great effort, and resumed her position in front; but, being again passed, the poor woman fell down in such distress that the gentleman who backed her lost all sight of his bet in the apprehension he had for her life. The lad continued at an unnecessarily quick pace, and completed the fifteen miles in seven minutes within the two hours, having run the last mile in five minutes. He had previously declared that if he was beat by a woman, he would never again revisit his paternal mansion.—*ibid.*

The longest law-suit which ever took place in England, or indeed, in any part of the world, arose in a litigated question respecting certain possessions near Wotton-under-Edge, in the county of Gloucester, between the heirs of Thomas Talbot, Viscount Lisle, on the one part, and the heirs of Lord Berkley on the other. The suit was instituted towards the end of the reign of Edward IV. and was still pending in the reign of James I. at which time a compromise took place between the parties—thus embracing a period of 120 years!

Court of King's Bench, Jan. 4.—*Blair and Another* v. *Thorn.*—This was an action by Messrs. Blair and Plimpton, seedsmen, against a farmer of Essex, to recover £13 10s. being the price of rye-seed sold in April, 1820, by sample. The defence was that the seed was entirely valueless, not a blade of grass having arisen from the land where it was sown, and that it had been bought as seed then coming in a hoy from Kent—Verdict for the defendant.

HOUSEHOULD SERVANTS, IN THE REIGN OF QUEEN ELIZABETH.

Servants in the sixteenth century, were held in a greater degree of subjection than they are in the present; as will appear by the following very curious list of penalties kept by the ancestors of an English Baronet, 1565—6, for the purpose of regulating the respective duties of the Household Servants.

I. That no seruant be absent from praier, at morning or euening, without a lawful excuse, to be alleged within one day after, vpon paine to forfiet for euery tyme, 2*d*.

II. That none swear anie othe upon paine for euery one, 1*d*.

III. That no man leaue anie doore open that he findeth shut, without there bee cause vpon paine for every tyme, 1*d*.

IV. That none of the men be in bed from Our Lady-day to Michaelmas, after 6 of the clock in the morning; nor out of his bed, after 10 of the clock at night: nor from Michaelmas to Our Lady-day, in bed after 7 in the morning, nor out after 9 at night, without reasonable cause on paine of 2*d*.

V. That no man's bed be vnmade, nor fire or candle box vncleane, after 8 of the clock in the morning, on paine of 1*d*.

VI. That no man commit any nuisance within any of the Courts, vpon paine of eury tyme it shall be proued, 1*d*.

VII. That no man teach anie of the children any vnhonest speeche, on paine of 4*d*.

VIII. That no man waite at the table without a trencher in his hand, except it be vpon some good cause, on paine of 1*d*.

IX. That no man appointed to wait at my table bee absent at meale, without reasonable cause, on paine of 1*d*.

X. If aine man breake a glasse, hee shall aunswer the price thereof out of his wages: and if it bee not known who breake it, the butler shall pay for it, on paine of 12*d*.

XI. The table must be couerred halfe an houer before 11 at dinner, at 6 at supper, or before on paine of 2*d*.

XII. That meate be readie at 11 or before at dinner, and 6, or before, at supper, on paine of 6*d*.

XIII. That none bee absent, without leave or good cause, the whole day, or anie part of it, on paine of 4*d*.

XIV. That no man strike his fellow on paine of losse of service; nor reuile or threaten, or provoke one another to strike, on paine of 12*d*.

XV. That no man come to the kitchen without reasonable cause on paine of 1*d*. and the cook likewise forfeit 1*d*.

XVI. That none toy with the maids, on paine of 4*d*.

XVII That no man weare foule shirt on Sundaie, nor broken hose or shooes, or doublett without buttons, on paine of 1*d*.

XVIII. That when anie stranger goeth hence, the chamber be dressed vp againe within 4 hours after, on paine of 1*d*.

XIX. That the hall be made cleane euery daie, by eight in the winter, and seaun in the summer, on paine of him that should doe it, 1*d*.

XX. That the court-gate be shut each meale, and not opened during dinner and supper, without just cause, on paine the porter to forfeit for euery tyme 1*d*.

XXI. That all stayrs in the house, and other rooms that need shall require, bee made cleane on Frydaie after dinner, on paine of forfeyture of euery one whom it shall belong vnto, 3*d*.

All which summes shall be duly paide each quarter-daie out of their wages; and bestowed on the poor or other godly vse.

THE FARMER.

BALTIMORE, FRIDAY, MARCH 21, 1823.

THE EDITOR TO HIS PATRONS.

☞ In closing the fourth year of my Editorial labours, appropriated during the hours of leisure, from official duties, to the agricultural interests of our country, I have little to say to my patrons on personal account. I trust I can appeal with confidence, to the pages of this volume, as proof, at least of industry and zeal, in the good cause, *beyond the hope of mere pecuniary gain*; and if that proof be not satisfactory, I have no new promises to make—all I can engage is to *persevere* with undiminished ardor, and with increased fondness for the pursuit. Should it have been suggested before, it will not now be deemed unreasonable to repeat the request, that our readers will bear in mind, the circumstances under which the Farmer made its first appearance; without a single pecuniary or intellectual contributor—at the sole hazard, and relying exclusively on the labour of the Editor. It is now written for and *paid for*, with a degree of ability and punctuality, as honorable to its patrons, as it is agreeable and flattering to the Editor. Many articles on very important subjects, not hitherto fully, if at all discussed, are in preparation for the next volume, intended chiefly to demonstrate the routes, and the resources for Internal Improvements, over the face of the country generally, and the principles on which they should be conducted; and also to call attention to various œconomical improvements in the construction of farm machinery, and buildings, and to point out new objects where old ones have become unprofitable, by reason either of increased supply, or lessened demand, and the processes to be followed in their cultivation. Looking at my supply of new books and tracts, lately received from Europe, with other materials, the suggestions of domestic experience, I can safely stipulate that the next volume, without treating of subjects already explained, will be as valuable to the practical farmer, and more so to his *growing children*, than any previous one.

I have however one petition to proffer to my friends. ☞ All journals lose a number of subscribers, in the course of the year, and especially at the end of a volume, my prayer then is that each steadfast subscriber, as far as it may be convenient and as he may think it deserves it, will encourage his neighbours to subscribe to the American Farmer, from the commencement of the fifth volume, so that the aggregate number of subscribers, may not be diminished.

Respectfully,
JOHN S. SKINNER.

☞ The Editor flatters himself that as his paper is taken purely *for the sake of reading it*, and that too, chiefly by respectable landholders; so no paper in the Union, is more punctually paid for: he earnestly requests that those who have complied with the terms of subscription will accept his thanks, and remember, that according to said terms, their subscription *is now due for the fifth volume*. The Printer, the Paper Maker, the workmen, must all be paid, from week to week.—The Editor himself, must have the means of supporting and educating his family, and defraying househould expenses—which in a town cannot be defrayed by promises—nothing *but money* will do; and when the subscriber complies with the terms, by paying the Editor in advance, he only trusts him for the amount of a single subscription, and four years experience has proved if the Editor live, the service will be rendered—he requests moreover, that he may be excused from receiving the empty compliment of a *subscription without the money*. This journal *may* fail, for want of good subscribers, but the Editor is resolved, that it shall never be broken down by *bad ones*.

* * *

☞ LIVE CATTLE—A very superior lot of 100 bullocks—were sold in this market since our last, by Mr. Seymour, from the south branch of Potomac. They were bought chiefly, by Mr. John Rusk and Mr. Kelso, and it will be worth the trouble to the lovers of fine beef, to view some of them in their stalls, in the Marsh Market, on Saturday morning. The spayed heifers, especially are of very superb quality. This lot of cattle, sold for $6, 6 25, and $6 50 per hundred, and they are supposed to have averaged from 650 to 700 weight each, at about five years old. The improved short horns of Champion's stock, in England, on the same keep, would give that weight of best "marbled" beef at three years.

* * *

SEED RECEIVED FOR DISTRIBUTION, SINCE LAST PUBLICATION.

Guinea Grass Seed, from Dr. John S. Bellinger, Barnwell District, S. C.

Persian Melon seed, from Mr. Jay of N. York.

Onion Seed from do. do.

Prime Tobacco Seed—from the "Vuelta abgo," in the Island of Cuba, near the Havana—from A. W. Foster, Esq. Greensburg, Pa.

White Millet Seed, from T. Pickering, Esq. Salem, Mass.

Except the Guinea Grass Seed, all the above have been distributed.

* * *

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $7 25—Howard st. Superfine, $7 12½—Wharf, do. $7—Wheat, white, $1 50 to 1 55—Red do., $1 45 to 1 50—Rye, 75 to 78 cents—Corn, 59 cents.—country Oats, 43 cents—Beef, 8 cents per pound—Live Cattle, $6 to $6 50 per cwt.—Bacon, round, 8 to 9 cents—Pork $4 50 to 5 50 per c lb.—6 to 8 cts. per lb.—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $7 50 to 7—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $5—Millet, $2—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons, 32 to 35 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, none in market—Herrings, No. 1, $3 62½ per bbl.—No. 2, $3 37½—Fine salt 80 to 90 cts. per bush.—Coarse, do. 75—Butter, 20 to 25 per lb.—Eggs, 25 cts. per doz.—Turkeys, 75 cts. to $1—Geese, 37½ to 50 cts. Chickens, $2 per doz.—Straw, $17 per ton—Hay, $10.

MARYLAND TOBACCO–Patuxent, old crop, sales at 5 a 3 to 7 a 3—do. do. *New* 4 a 10—One hhd. fine yellow from Calvert County, raised by Mr. Mordica F. Smith, sold at $20—2 do. fine spangled, Baltimore County, raised by Mr. John Ridgley, sold at $18.

The Farmers will perceive that the late news has already had a happy effect on the price of grain. The next will be more decisive, especially as to the part that England will take in the great game of destroying human life—we hope this auspicious change, in the prospects of Farmers, will induce them not only to hold on upon their old friend the American Farmer, but to send to it the names of some of their good neighbours.

Farm, &c. For Sale.

The subscriber will sell about 500 acres of Cedar Park, the residence of the late Col. JOHN FRANCIS MERCER, situated on West River, in Ann Arundel county. The soil, naturally fertile, has been highly improved by cultivation, and is now in a state to reward, most liberally, an ordinary share of skill and industry. As, however, a more adequate and satisfactory estimate of its productiveness could be obtained by visiting and examining the state of the growing crops, &c. than from any description that can be given, persons who may contemplate purchasing, are invited to visit it, on or before the 20th June next, when, if not previously disposed of, it will be offered at public sale, together with a variety of personal property, consisting of slaves, stock, farming utensils, &c. The subscriber would willingly make a considerable sacrifice, in order to dispose of, together with the land, a number of valuable slaves, adequate to its cultivation, an arrangement which could not fail to prove advantageous to the purchaser, as they have been reared under a skilful manager, are well tutored in the cultivation of the crops best adapted to the soil, and would be more happy and contented if their habits and connections remained unbroken.

JOHN MERCER.

Cedar Park, March 12.

ROBERT SINCLAIR,

At his Plough and Seed Store, Pratt-street wharf,

Has just received, per Belvidera, from London a general assortment of CABBAGE AND OTHER SEEDS, which, in order to prevent their being injured by dampness, in crossing the sea, have been enclosed in a tin case—including the single and double blossom, early frame and nights marrow fat PEAS. He has also received from Philadelphia, an assortment of SPADES, square and round SHOVELS, with steel points; steel and other HOES.

In Store,

MATTOCK and PICKS, with or without handles; Clover, Timothy, Orchard, Herdsgrass and Hemp SEEDS—also a few bushels of a new species of BARLEY, which separates from its chaff like Wheat, called the naked Barley, which is said to be worth one third more per bushel, than the common kind. Potato and Poland OATS, for seed; PLOUGHS, WHEAT-FANS, WIRE WORK, and Implements of Husbandry in general.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON on the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for Printing or Binding, with proper directions promply attended to, addressed to J. Robinson, Baltimore.